

FAX TO: ALCHEM (205) 336 1461

10/5/89

clg to 28-4
RF

SUE - THESE ARE PASCO REQUIREMENTS
PLEASE ANALYSE THE ANNUALS YOU JUST REC'D ACCORDINGLY.

PASCO LANDFILL WELL MEASUREMENTS						
	SOLVENTS	TOTAL Fe Mn Cu Ba	HERBICIDES 24D, 245T, 245TP	MFG PARAMETERS	STATIC H ₂ O LEVEL	
JUB CONTROL	1/QTR	1/QTR		1/QTR	1/QTR	
JUB 2	1/QTR	1/QTR		1/QTR	1/QTR	
EE3	1/QTR	1/QTR	1/YR	1/QTR	1/QTR	
JUB 4	1/QTR	1/QTR		1/QTR	1/QTR	
EE2	1/QTR	1/QTR	1/YR		1/QTR	
EE1	1/YR	1/YR			1/QTR	
EE4	1/YR	1/YR	1/YR		1/QTR	
EE5	1/YR	1/YR	1/YR		1/QTR	
EE6	1/YR	1/YR			1/QTR	
EE7	1/YR	1/YR			1/QTR	
EE8	1/YR	1/YR			1/QTR	
WATER SUPPLY	1/YR	1/YR			1/QTR	
JUB 1					1/QTR	NO WATER QUAL. REQD.
JUB 3					1/QTR	NO WATER QUAL. REQD.
EE9						WELL DESTROYED

ANNUALLY
Organic Solvents

1,1-Dichloroethylene
1,1-Dichloroethane
Trichloroethylene
Chloroform
1,1,1-Trichloroethane
Trichloroethylene
Tetrachloroethylene
Toluene
Total Xylene

QUARTERLY
Organic Solvents

1,1-Dichloroethylene
1,1-Dichloroethane
Trichloroethylene
Chloroform
1,1,1-Trichloroethane
Trichloroethylene
Tetrachloroethylene
Toluene
Total Xylene
Vinyl chloride

QUARTERLY
Minimum Functional
Standard Contaminants

Temperature
Conductivity
pH
Chloride
Nitrate, Nitrite, and Ammonia
as Nitrogen
Sulfate
Dissolved Iron
Dissolved Zinc and Manganese
Chemical Oxygen Demand
Total Organic Carbon
Total Coliform



PASSE 1.7V2
10/5/89

Technico & Enviro Services Co.

FILE/2

(509) 7357283

Suite 33

1776 Fowler

Richland, Wa. 99352

December 5, 1988

Mr. Cris Matthews
Solid Waste Coordinator
Environmental Quality Div.
Washington Dept. of Ecology
N. 4601 Monroe Street
Suite 100
Spokane, WA 99205-1295

Subject: Groundwater Monitoring Results at the Pasco
Sanitary Landfill

Dear Mr. Matthews:

This letter provides you with the water quality monitoring results for the fourth quarter of 1988. Wells requiring annual sampling will be sampled before the end of December.

Sincerely,


John A. Zillich

JAZ/tg

Enclosure

cc: Larry Dietrich
Larry Kamberg

PLF FIELD MEAS 10/88

				GROUND WATER					
				ELEVATION DATA SHEET					
SITE: PASCO									
DATE: 10/88									
		MEASURED	TOP OF CASING	DEPTH TO	GROUND WATER	SPEC COND	pH	TEMP C	
WELL NO.	DATE	AT	ELEVATION	WATER	ELEVATION				
JUB CONTROL	10/26/88	TOP OF PVC	411.6	54.24	357.36	520	7.8	14.4	
JUB 1	10/26/88	TOP OF PVC	417.1	69.97	347.13				
JUB 2	10/26/88	HOLE IN CAP	408.3	60.81	347.50	590	7.75	17.0	
JUB 3	10/26/88	TOP OF PVC	420.4	74.28	346.12				
JUB 4	10/26/88	TOP OF PVC	393.7			660	7.4	16.3	
EE 1	10/26/88	TOP OF PIPE	417.2	59.73	357.47				
EE 2	10/26/88	HOLE IN CAP	418.9	68.73	350.14	650	7.6	16.4	
EE 3	10/26/88	HOLE IN CAP	416.8	67.14	349.63	775	7.05	17.0	
EE 4	10/26/88	TOP OF PIPE	397.6	47.30	350.30				
EE 5	10/26/88	TOP OF PIPE	407.9	56.07	351.83				
EE 6	10/26/88	TOP OF PIPE	427.0	73.96	353.04				
EE 7	10/26/88	TOP OF PIPE	425.6	73.09	352.51				
EE 8	10/26/88	TOP OF PIPE	428.4	75.52	352.88				

ALCHEM LABORATORY

250 S. Beechwood Avenue, Suite II
Boise, Idaho 83709
(208) 376-2257

LABORATORY REPORT

TECHNICO-ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILlich
SOURCE -: D-I BLANK

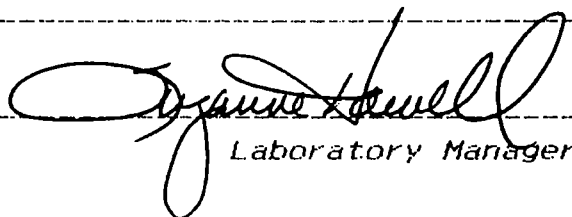
DATE COLLECTED - - -10/27/88
TIME COLLECTED - - -
DATE RECEIVED - - - 10/28/88
DATE REPORTED - - - 11/07/88
SUBMITTED : JOHN ZILlich

LAB SAMPLE NUMBER - 5574

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
IRON (DISS.)	0.06	10/31/88	KS
MANGANESE (DISS.)	<0.01	10/31/88	KS
ZINC (DISS.)	0.011	10/31/88	RC

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested. Liability is limited to cost of analysis.


Laboratory Manager

ALCHEM LABORATORY

250 S. Beechwood Avenue, Suite II
Boise, Idaho 83709
(208) 376-2257

LABORATORY REPORT

TECHNICO-ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILlich
SOURCE -: RE 2

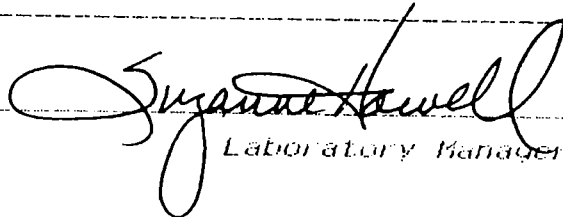
DATE COLLECTED - - -10/27/88
TIME COLLECTED - - -
DATE RECEIVED - - - 10/28/88
DATE REPORTED - - - 11/07/88
SUBMITTED : JOHN ZILlich

LAB SAMPLE NUMBER - 5573

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
CHEMICAL OXYGEN DEMAND	9.0	10/31/88	RC
BARIUM	0.10	11/07/88	DM
COPPER	<0.01	10/31/88	SH
IRON	0.08	10/31/88	KS
MANGANESE	<0.01	10/31/88	KS
ZINC	0.001	10/31/88	RC
IRON (DISS.)	<0.01	10/31/88	KS
MANGANESE (DISS.)	<0.01	10/31/88	KS
ZINC (DISS.)	<0.001	10/31/88	RC

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested. Liability is limited to cost of analysis.


Laboratory Manager

ALCHEM LABORATORY

250 S. Beechwood Avenue, Suite II
Boise, Idaho 83709
(208) 376-2257

LABORATORY REPORT

TECHNICO-ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILLICH
SOURCE -: JUB 2

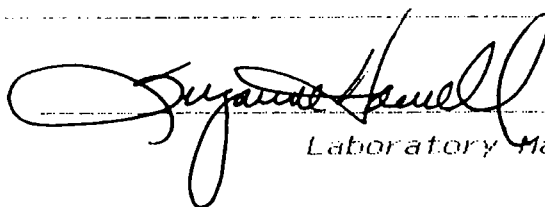
DATE COLLECTED - - -10/27/88
TIME COLLECTED - - -
DATE RECEIVED - - - 10/28/88
DATE REPORTED - - - 11/07/88
SUBMITTED : JOHN ZILLICH

LAB SAMPLE NUMBER - 5572

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
CHEMICAL OXYGEN DEMAND	4.0	10/31/88	RC
BARIUM	<0.10	11/07/88	DM
COPPER	<0.01	10/31/88	SH
IRON	0.05	10/31/88	KS
MANGANESE	<0.01	10/31/88	KS
ZINC	0.001	10/31/88	RC
IRON (DISS.)	0.25	10/31/88	KS
MANGANESE (DISS.)	<0.01	10/31/88	KS
ZINC (DISS.)	0.002	10/31/88	RC

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested. Liability is limited to cost of analysis.



Laboratory Manager

ALCHEM LABORATORY

250 S. Beechwood Avenue, Suite II
Boise, Idaho 83709
(208) 376-2257

LABORATORY REPORT

TECHNICO-ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILlich
SOURCE -: JUB CONTROL

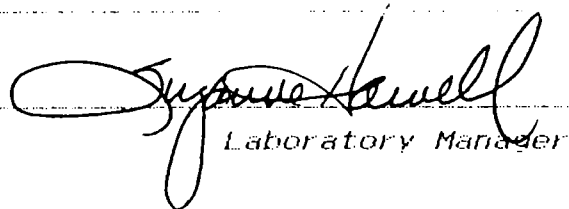
DATE COLLECTED - - -10/27/88
TIME COLLECTED - - -
DATE RECEIVED - - - 10/28/88
DATE REPORTED - - - 11/07/88
SUBMITTED : JOHN ZILlich

LAB SAMPLE NUMBER - 5571

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
TOTAL COLIFORM	13	10/28/88	KS
CHEMICAL OXYGEN DEMAND	10.0	10/31/88	RC
BARIUM	0.10	11/07/88	DM
COPPER	<0.01	10/31/88	SH
IRON	0.09	10/31/88	KS
MANGANESE	<0.01	10/31/88	KS
ZINC	0.002	10/31/88	RC
IRON (DISS.)	<0.01	10/31/88	KS
MANGANESE (DISS.)	<0.01	10/31/88	KS
ZINC (DISS.)	0.009	10/31/88	RC

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested. Liability is limited to cost of analysis.


Laboratory Manager

ALCHEM LABORATORY

250 S. Beechwood Avenue, Suite II
Boise, Idaho 83709
(208) 376-2257

LABORATORY REPORT

TECHNICO-ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILlich
SOURCE -: EE 3

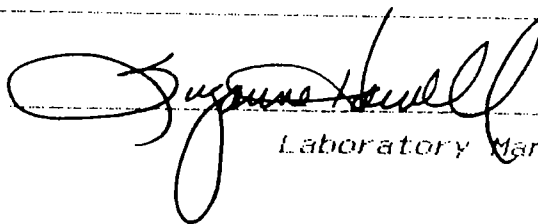
DATE COLLECTED - - - 10/27/88
TIME COLLECTED - - -
DATE RECEIVED - - - 10/28/88
DATE REPORTED - - - 11/07/88
SUBMITTED : JOHN ZILlich

LAB SAMPLE NUMBER - 5570

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
TOTAL COLIFORM	5	10/28/88	KS
CHEMICAL OXYGEN DEMAND	18.0	10/31/88	RC
BARIUM	0.20	11/07/88	DM
COPPER	<0.01	10/31/88	SH
IRON	12.70	10/31/88	KS
MANGANESE	1.37	10/31/88	KS
ZINC	0.004	10/31/88	RC
IRON (DISS.)	11.64	10/31/88	KS
MANGANESE (DISS.)	1.33	10/31/88	KS
ZINC (DISS.)	0.001	10/31/88	RC

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested. Liability is limited to cost of analysis.


Laboratory Manager

ALCHEM LABORATORY

250 S. Beechwood Avenue, Suite II
Boise, Idaho 83709
(208) 376-2257

received
11 9 88

LABORATORY REPORT

TECHNICO-ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILLICH
SOURCE -: JUB 4

DATE COLLECTED - - -10/27/88
TIME COLLECTED - - -
DATE RECEIVED - - - 10/28/88
DATE REPORTED - - - 11/07/88
SUBMITTED : JOHN ZILLICH

LAB SAMPLE NUMBER - 5569

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
TOTAL COLIFORM	** <1	10/28/88	KS
CHEMICAL OXYGEN DEMAND	7.0	10/31/88	RC
BARIUM	0.20	11/07/88	DM
COPPER	<0.01	10/31/88	SH
IRON	0.06	10/31/88	KS
MANGANESE	<0.01	10/31/88	KS
ZINC	0.003	10/31/88	RC
IRON (DISS.)	<0.01	10/31/88	KS
MANGANESE (DISS.)	<0.01	10/31/88	KS
ZINC (DISS.)	<0.001	10/31/88	RC

COMMENTS: ** NO INTESTINAL BACTERIA WERE FOUND ON CULTURE PLATE. **

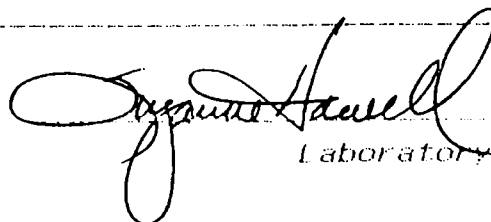
This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested. Liability is limited to cost of analysis.

The Blank has
been subtracted

from the Diss

metals. Results

with filter step to be
final results on 11/15/88



Laboratory Manager



Burmah Technical Services, Inc.
Analytical Laboratories Division

15199 Community Road
P.O. Drawer 2609
Gulfport, MS 39505

601-863-3036

ANALYTICAL REPORT

Technico & Environmental
201 West 33rd Avenue
Kennewick, Washington 99337

ATTENTION: Mr. John Zillich

IDENTIFICATION: Water Samples
PASCO LANDFILL

DATE SAMPLE RECEIVED: 11/02/88
MONTH COVERED: November, 1988
CLIENT NUMBER: TEC200
SAMPLED BY: Client
FREQUENCY: As Requested
DATE: November 23, 1988
Page 2 of 2

<u>SAMPLE NUMBER:</u>	<u>CLIENT I.D.</u>	<u>TOC</u>		<u>UNITS</u>
09639	JUB Control	18.1	18.7 (Rep)	mg/l
09640	JUB2	15.9		mg/l
09641	JUB4	19.4		mg/l
09642	EE2	N/A		mg/l
09643	EE3	34.1	34.6 (Rep)	mg/l

D. I. Blank - <1.00
46 mg/l Check Standard - 49.2
Acceptable Range - 35-57
Spike Recovery - 97%
Date Analyzed - 11/3/88
Analyst - DD

APPROVED BY:


KAREN H. BROWN
LABORATORY MANAGER



Burmah Technical Services, Inc.
Analytical Laboratories Division

15199 Community Road
P.O. Drawer 2609
Gulfport, MS 39505

601-863-3036

ANALYTICAL REPORT

received
12/1/88

Technico & Environmental
201 West 33rd Avenue
Kennewick, Washington 99337

ATTENTION: Mr. John Zillich

DATE SAMPLE RECEIVED: 11/02/88
MONTH COVERED: November, 1988
CLIENT NUMBER: TEC200
SAMPLED BY: Client
FREQUENCY: As Requested
DATE: November 23, 1988
Page 1 of 2

IDENTIFICATION: Water Samples
PASCO LANDFILL

SAMPLE NUMBER:	09639	09640	09641	09642	09643	
CLIENT ID:	JUB CONTROL	JUB2	JUB4	EE2	EE3	UNITS
Vinyl Chloride	<5	<5	N/A	<5	<5	µg/l
1,1-Dichloroethylene	<5	35	N/A	<5	18	µg/l
1,1-Dichloroethane	<5	85	N/A	6	130	µg/l
Chloroform	<5	54	N/A	<5	44	µg/l
1,1,1-Trichloroethane	<5	230	N/A	40	291	µg/l
Trichloroethylene	<5	50	N/A	<5	112	µg/l
Tetrachloroethylene	<5	<5	N/A	<5	9	µg/l
Total Xylenes	<5	14	N/A	<5	85	µg/l

APPROVED BY:

KAREN H. BROWN
LABORATORY MANAGER

WATER BACTERIOLOGICAL ANALYSIS

SAMPLE COLLECTION: READ INSTRUCTIONS ON BACK OF GOLDENROD COPY

If instructions are not followed, sample will be rejected.

DATE COLLECTED			TIME COLLECTED		COUNTY NAME
MONTH	DAY	YEAR	AM	PM	
10	26	88	<input type="checkbox"/> AM	<input checked="" type="checkbox"/> PM	

TYPE OF SYSTEM	IF PUBLIC SYSTEM, COMPLETE:	CIRCLE CLASS						
<input type="checkbox"/> PUBLIC <input type="checkbox"/> INDIVIDUAL (serves only 1 residence)	I.D. No. <table border="1"><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>							1 2 3 4

NAME OF SYSTEM
1503 2 Well

SPECIFIC LOCATION WHERE SAMPLE COLLECTED (ie. kitchen tap @ school, fire station, fountain)	SYSTEM OWNER/MGR. NAME AND TELEPHONE NO.
J B Zwecker	Rose L. Luff

SAMPLE COLLECTED BY: (Name)
Zellner

SOURCE TYPE
<input type="checkbox"/> SURFACE <input type="checkbox"/> WELL <input type="checkbox"/> SPRING <input type="checkbox"/> PURCHASED <input type="checkbox"/> COMBINATION or OTHER

SEND REPORT TO: (Print Full Name, Address and Zip Code)
Richard Tschunke 1776 Fowler Richland WASHINGTON

TYPE OF SAMPLE (Check only one in this column)
1. <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> Chlorinated (Residual: _____ Total _____ Free) check treatment → <input type="checkbox"/> Filtered <input type="checkbox"/> Untreated or Other _____
2. <input type="checkbox"/> RAW SOURCE WATER
3. <input type="checkbox"/> NEW CONSTRUCTION or REPAIRS
4. <input type="checkbox"/> OTHER (Specify) _____

COMPLETE IF THIS SAMPLE IS A CHECK SAMPLE
PREVIOUS LAB NO. _____
PREVIOUS SAMPLE COLLECTION DATE _____
REMARKS: _____

LABORATORY RESULTS (FOR LAB USE ONLY)

MPN - COLIFORM	STD PLATE COUNT	SAMPLE NOT TESTED BECAUSE:
5/5 tubes positive	_____/ml	<input type="checkbox"/> Sample too cloudy
MPN DILUTION	TEST UNSUITABLE	<input type="checkbox"/> Not in Proper Container
_____/100 ml	1. <input type="checkbox"/> Confluent Growth	<input type="checkbox"/> Insufficient Information Provided—Please Read Instructions on Form
MF COLIFORM	2. <input type="checkbox"/> TNTC	
_____/100 ml	3. <input type="checkbox"/> Excess Debris	
FECAL COLIFORM	4. <input type="checkbox"/> _____	
<input type="checkbox"/> MPN <input type="checkbox"/> MF		
_____/100 ml		

FOR DRINKING WATER SAMPLES ONLY, THESE RESULTS ARE:

☐ SATISFACTORY ☒ UNSATISFACTORY

SEE REVERSE SIDE OF GREEN COPY FOR EXPLANATION OF RESULTS

LAB NO.	DATE, TIME RECEIVED—	RECEIVED BY
6203569	10-26-88 4:15	DM
DATE REPORTED	LABORATORY:	
10-28-88		
REMARKS		

WATER SUPPLIER COPY

WATER BACTERIOLOGICAL ANALYSIS

SAMPLE COLLECTION: READ INSTRUCTIONS ON BACK OF GOLDENROD COPY

If instructions are not followed, sample will be rejected.

DATE COLLECTED			TIME COLLECTED		COUNTY NAME
MONTH	DAY	YEAR	AM	PM	
10	26	88	<input type="checkbox"/> AM	<input checked="" type="checkbox"/> PM	

TYPE OF SYSTEM	IF PUBLIC SYSTEM, COMPLETE:	CIRCLE CLASS						
<input type="checkbox"/> PUBLIC <input type="checkbox"/> INDIVIDUAL (serves only 1 residence)	I.D. No. <table border="1"><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>							1 2 3 4

NAME OF SYSTEM
FE 3 Well

SPECIFIC LOCATION WHERE SAMPLE COLLECTED (ie. kitchen tap @ school, fire station, fountain)	SYSTEM OWNER/MGR. NAME AND TELEPHONE NO.
FE 3 Well	Rose L. Luff

SAMPLE COLLECTED BY: (Name)
Zellner

SOURCE TYPE
<input type="checkbox"/> SURFACE <input type="checkbox"/> WELL <input type="checkbox"/> SPRING <input type="checkbox"/> PURCHASED <input type="checkbox"/> COMBINATION or OTHER

SEND REPORT TO: (Print Full Name, Address and Zip Code)
Richard Tschunke 1776 Fowler Richland WASHINGTON

TYPE OF SAMPLE (Check only one in this column)
1. <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> Chlorinated (Residual: _____ Total _____ Free) check treatment → <input type="checkbox"/> Filtered <input type="checkbox"/> Untreated or Other _____
2. <input type="checkbox"/> RAW SOURCE WATER
3. <input type="checkbox"/> NEW CONSTRUCTION or REPAIRS
4. <input type="checkbox"/> OTHER (Specify) _____

COMPLETE IF THIS SAMPLE IS A CHECK SAMPLE
PREVIOUS LAB NO. _____
PREVIOUS SAMPLE COLLECTION DATE _____
REMARKS: _____

LABORATORY RESULTS (FOR LAB USE ONLY)

MPN - COLIFORM	STD PLATE COUNT	SAMPLE NOT TESTED BECAUSE:
5/5 tubes positive	_____/ml	<input type="checkbox"/> Sample too cloudy
MPN DILUTION	TEST UNSUITABLE	<input type="checkbox"/> Not in Proper Container
_____/100 ml	1. <input type="checkbox"/> Confluent Growth	<input type="checkbox"/> Insufficient Information Provided—Please Read Instructions on Form
MF COLIFORM	2. <input type="checkbox"/> TNTC	
_____/100 ml	3. <input type="checkbox"/> Excess Debris	
FECAL COLIFORM	4. <input type="checkbox"/> _____	
<input type="checkbox"/> MPN <input type="checkbox"/> MF		
_____/100 ml		

FOR DRINKING WATER SAMPLES ONLY, THESE RESULTS ARE:

☐ SATISFACTORY ☒ UNSATISFACTORY

SEE REVERSE SIDE OF GREEN COPY FOR EXPLANATION OF RESULTS

LAB NO.	DATE, TIME RECEIVED—	RECEIVED BY
6203568	10-26-88 4:15	DM
DATE REPORTED	LABORATORY:	
10-29-88		
REMARKS		

WATER SUPPLIER COPY

**Results for October Sampling
at Pasco Sanitary Landfill**

Location	Date	Cl	SO ₄
JUB Control	10/27/88	28	31.6
EE 3	10/26/88	45	20.6
JUB 2	10/26/88	30	34.5
JUB 4	10/27/88	21	31.1

FIG.4. TETRACHLOROETHYLENE EE3 VS JUB2.

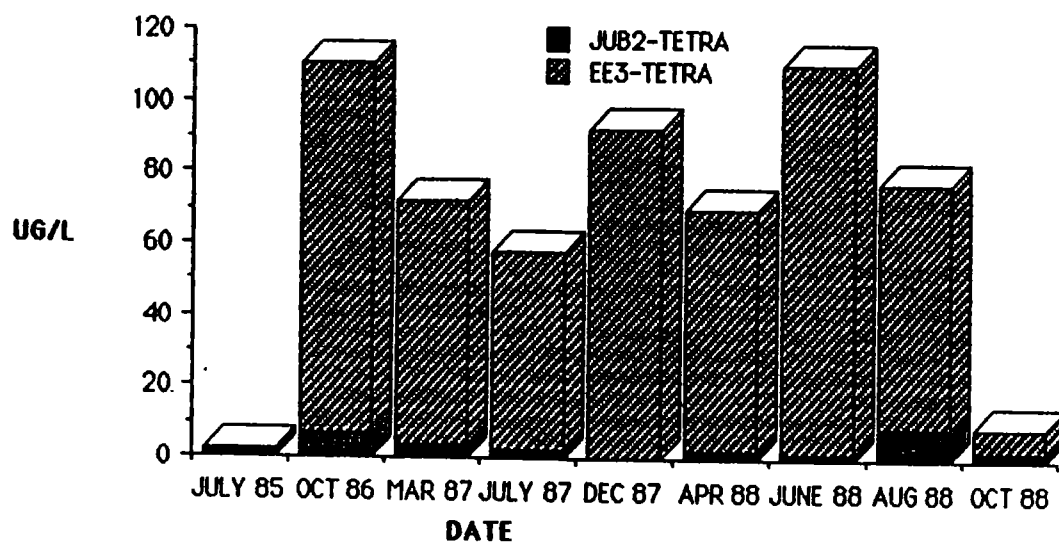
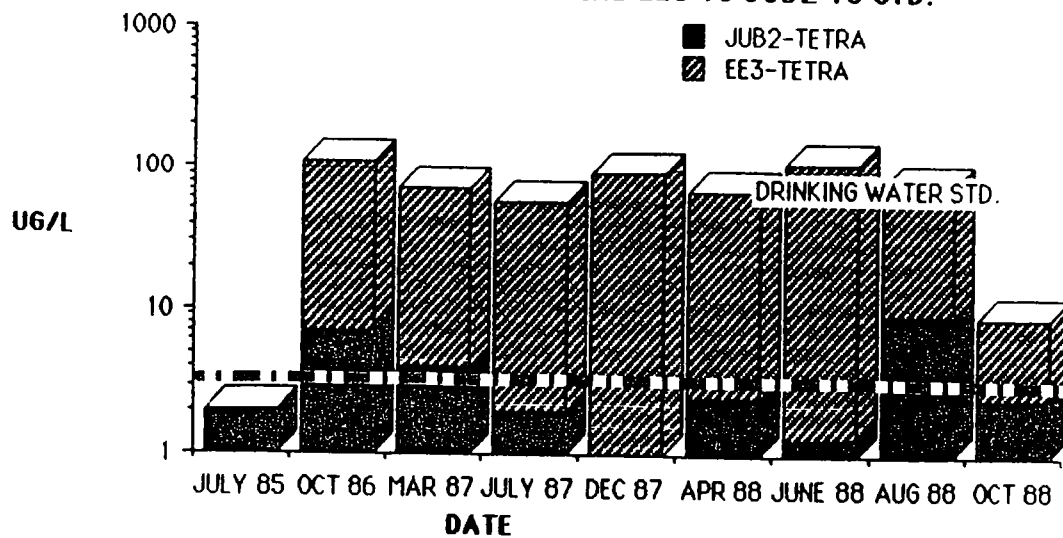


FIG.4L. TETRACHLOROETHYLENE EE3 VS JUB2 VS STD.



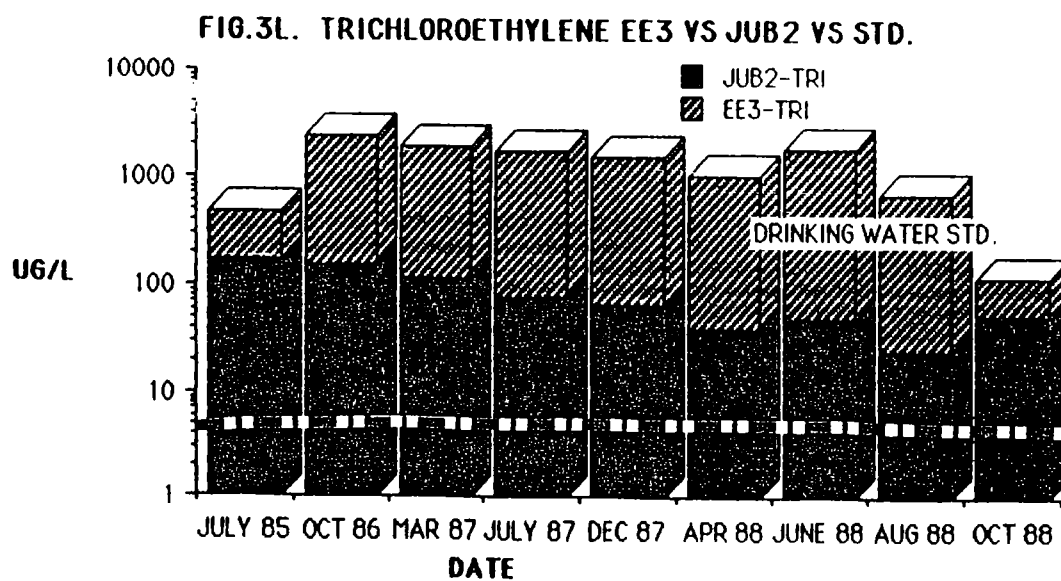
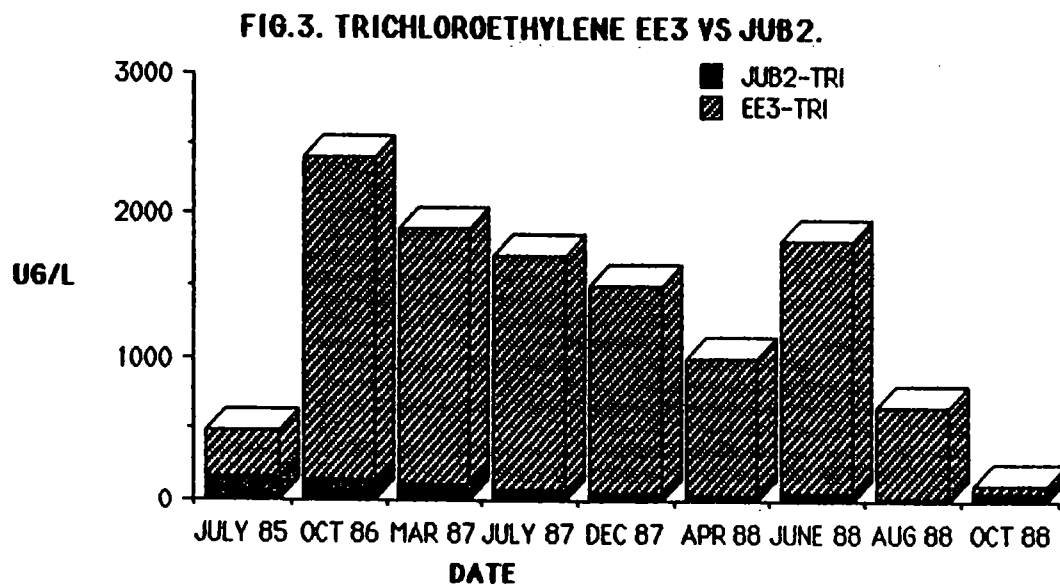


FIG.2. 1,1,1 TRICHLOROETHANE EE3 VS JUB2.

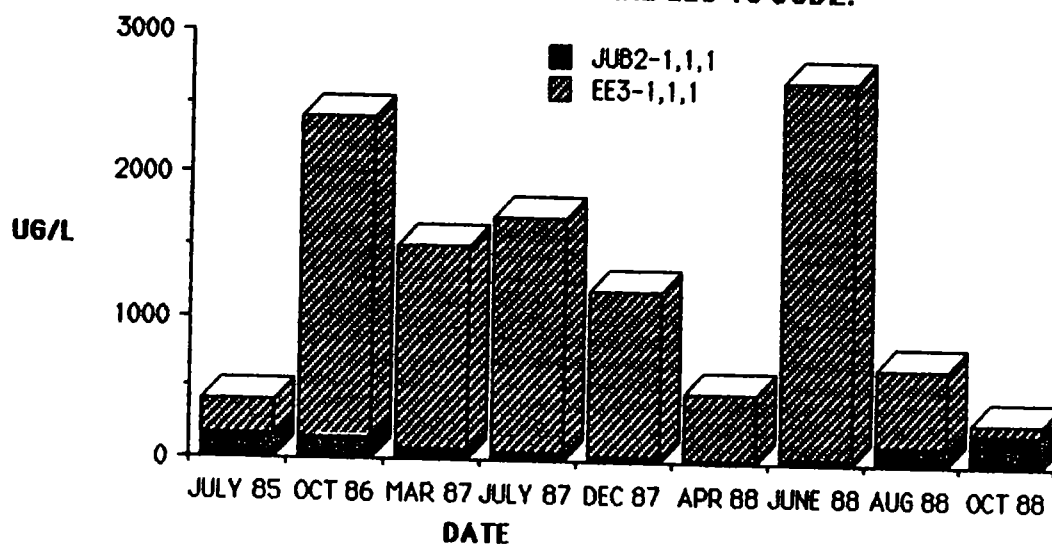
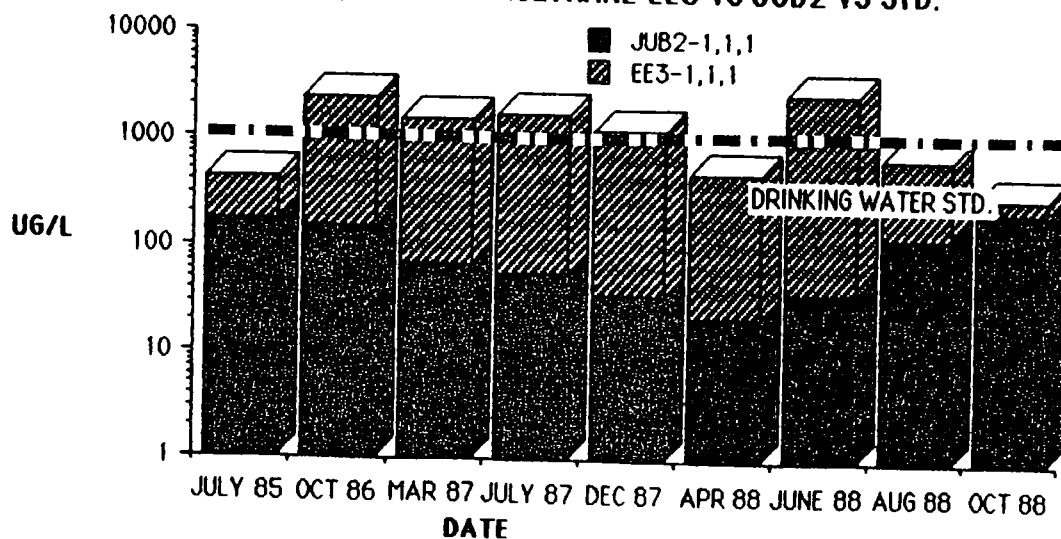


FIG.2L. 1,1,1 TRICHLOROETHANE EE3 VS JUB2 VS STD.



JOB No. 12532 DATE: 10/27/88

Sample No. B10206VD.WA1

Matrix: Water Analysis: GC-PID

Surrogate
Compound

Percent
Recovery

Comment

Control
Limits

4-Chlorotoluene

100

20 - 150

Sample No. 01

Matrix: Water Analysis: GC-PID

Surrogate
Compound

Percent
Recovery

Comment

Control
Limits

4-Chlorotoluene

88

20 - 150

Sample No. 02@1/2

Matrix: Water Analysis: GC-PID

Surrogate
Compound

Percent
Recovery

Comment

Control
Limits

4-Chlorotoluene

83

20 - 150

JOB No. 12532 DATE: 10/27/88

Sample No. B10206VD.WA1

Matrix: Water Analysis: GC-HALL

Surrogate
Compound

Percent
Recovery

Comment

Control
Limits

4-Bromofluorobenzene
4-Chlorotoluene

97
101

76 - 121
20 - 150

Sample No. 01

Matrix: Water Analysis: GC-HALL

Surrogate
Compound

Percent
Recovery

Comment

Control
Limits

Bromochloromethane
4-Chlorotoluene

78
74

73 - 125
20 - 150

Sample No. 02@1/2

Matrix: Water Analysis: GC-HALL

Surrogate
Compound

Percent
Recovery

Comment

Control
Limits

4-Bromofluorobenzene
4-Chlorotoluene

78
71

76 - 121
20 - 150



Testing Laboratories, Inc.

940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Certificate

Chemistry, Microbiology, and Technical Services

CLIENT: Technico & Environmental Services
201 West 33rd Avenue
Kennewick, WA 99336
ATTN: John Zillich

LABORATORY NO. 12532

DATE: Nov. 10, 1988

Project No. 88.4

REPORT ON: WATER

SAMPLE

IDENTIFICATION: Submitted 10/07/88 and identified as shown below:

- 1) Pasco Landfill Tippet Spray
- 2) Pasco Landfill Tippet Well Bead

TESTS PERFORMED AND RESULTS:

	<u>parts per billion (ug/L)</u>		
	<u>1</u>	<u>2#</u>	<u>Method Blank</u>
1,1-Dichloroethylene	<1.0	<2.0	<1.
1,1-Dichloroethane	<1.0	<2.0	<1.
trans-1,2-dichloroethylene	<1.0	<2.0	<1.
Chloroform	<1.0	<2.0	<1.
1,1,1-Trichloroethane	<1.0	<2.0	<1.
Trichloroethylene	<1.0	<2.0	<1.
Toluene	<1.0	<2.0	<1.
Xylene	<1.0	<2.0	<1.
Tetrachloroethylene	2.0	<2.0	<1.
Vinyl Chloride	<10.	<20.	<10.

Key

< indicates "less than"

Only 5 mls of Sample was purged due to sample freezing.

Respectfully submitted,

Laucks Testing Laboratories, Inc.

J. M. Owens

JMO:1aj



This report is submitted for the exclusive use of the person, partnership, or corporation to whom it is addressed. Subsequent use of the name of this company or any member of its staff in connection with the advertising or sale of any product or process will be granted only on contract. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



Testing Laboratories, Inc.

940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

Chemistry, Microbiology, and Technical Services

Certificate

Technico & Environmental Services

PAGE NO. 2

LABORATORY NO. 12532

APPENDIX

Surrogate Recovery Quality Control Report

Attached are surrogate (chemically similar) compounds utilized in the analysis of organic compounds. The surrogates are added to every sample prior to extraction and analysis to monitor for matrix effects, purging efficiency, and sample processing errors. The control limits represent the 95% confidence interval established in our laboratory through repetitive analysis of these sample types.



This report is submitted for the exclusive use of the person, partnership, or corporation to whom it is addressed. Subsequent use of the name of this company or any member of its staff in connection with the advertising or sale of any product or process will be granted only on contract. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.

Technico & Enviro Services Co.

FILE COPY/c

(509) 7357283

Suite 33

1776 Fowler

Richland, Wa. 99352

April 25, 1989

Mr. Cris Matthews
Solid Waste Coordinator
Environmental Quality Div.
Washington Dept. of Ecology
N. 461 Monroe Street, Suite 100
Spokane, WA 99205-1295

Subject: Groundwater Monitoring Results at the Pasco
Sanitary Landfill

Dear Mr. Matthews:

This letter provides you with the water quality monitoring results for
the first quarter of 1989.

Sincerely,

John A. Zillich

JAZ/tg

Enclosure

cc: Larry Dietrich
Larry Kamberg

SITE: PASCO		ELEVATION DATA SHEET						
DATE: 3/89								
WELL NO.	DATE	MEASURED AT	TOP OF CASING ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION	SPEC COND	pH	TEMP C
JUB CONTROL	3/20/89	TOP OF PVC	411.6	52.80	358.80	540	7.85	16.8
JUB 1	3/20/89	TOP OF PVC	417.1	68.41	348.69			
JUB 2	3/20/89	HOLE IN CAP	408.3	59.35	348.96	560	7.6	16.8
JUB 3	3/20/89	TOP OF PVC	420.4	72.55	347.85			
JUB 4	3/20/89	TOP OF PVC	393.7	40.22	353.48	640	7.45	17.9
EE 1	3/20/89	TOP OF PIPE	417.2	57.49	359.71			
EE 2	3/20/89	HOLE IN CAP	418.9	67.29	351.58	650	7.4	16.6
EE 3	3/20/89	HOLE IN CAP	416.8	65.60	351.17	680	7	16.8
EE 4	3/20/89	TOP OF PIPE	397.6	45.40	352.20			
EE 5	3/20/89	TOP OF PIPE	407.9	58.51	349.39			
EE 6	3/20/89	TOP OF PIPE	427.0	72.25	354.75			
EE 7	3/20/89	TOP OF PIPE	425.6	71.20	354.40			
EE 8	3/20/89	TOP OF PIPE	428.4	71.55	356.85			

TECHNICO & ENVIRO SERVICES CO.
ANALYTICAL REPORT

CLIENT: PASCO LANDFILL
SAMPLED: 3/20/89
REPORTED: 4/20/89

LOCATION	DATE	CHLORIDE (MG/L)	AMMONIA (MG/L)	NITRITE (MG/L)	NITRATE (MG/L)
JUB CONRTOL	3/20/89	25.0		<0.05	7.8
EE3	3/20/89	32.5	<0.1	<0.05	0.8
JUB2	3/20/89	22.5	<0.1	<0.05	8.8
JUB4	3/20/89	22.5	<0.1	<0.05	7.6



Burmah Technical Services, Inc.
Analytical Laboratories Division

15199 Community Road
P.O. Drawer 2609
Gulfport, MS 39505

601-863-3036

ANALYTICAL REPORT

Technico & Environmental
1776 Fowler, Suite 33
Richland, Washington 99352

ATTENTION: Mr. John Zillich

DATE SAMPLE RECEIVED: 3/21/89
MONTH COVERED: March, 1989
CLIENT NUMBER: TEC200
SAMPLED BY: Client
FREQUENCY: As Requested
DATE: March 31, 1989

IDENTIFICATION: Water Samples

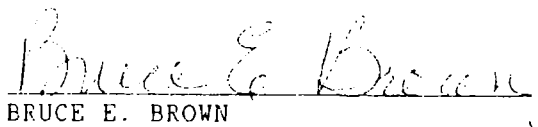
SAMPLE NUMBER:	13551	13552	13553	13554	13555	
CLIENT ID:	JUB Control	JUB4	EE3	JUB2	EE2	UNITS

EPA 601 & 602

Vinyl Chloride	<2	<2	<2	<2	N/A	µg/l
1,1-Dichloroethane	<2	<2	70	8	<2	µg/l
Chloroform	<2	<2	10	15	<2	µg/l
1,1,1-Trichloroethane	<2	<2	1000	180	15	µg/l
Trichloroethylene	<2	<2	1100	200	10	µg/l
Tetrachloroethylene	<2	4	60	8	4	µg/l
Total Xylenes	<2	9	200	<2	<2	µg/l
TOC	9	12	21	10	N/A	mg/l

D.I. Blank - <1.00
46 mg/l Check Standard - 45.0
Acceptable Range - 35-57
Date Analyzed - 3/23/89
Analyst - DD

APPROVED BY:



BRUCE E. BROWN
LABORATORY MANAGER

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO & ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILlich
SOURCE -: JUB CONTROL

DATE COLLECTED - - -03/20/89
TIME COLLECTED - - -
DATE RECEIVED - - - 03/21/89
DATE REPORTED - - - 04/05/89
SUBMITTED : JOHN ZILlich

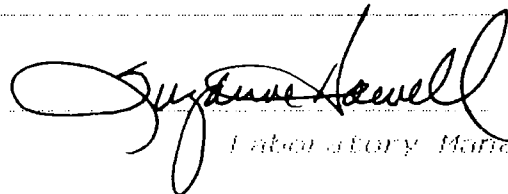
LAB SAMPLE NUMBER - 7250

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
TOTAL COLIFORM	** <1	03/21/89	KS
CHEMICAL OXYGEN DEMAND	11.0	03/31/89	RC
BARIUM	<0.1	04/04/89	DM
COPPER	<0.01	03/21/89	SH
IRON (DISS.)	0.05	03/28/89	SH
MANGANESE (DISS.)	<0.01	03/21/89	SH
ZINC (DISS.)	0.031	03/28/89	SH

COMMENTS: ** NO COLIFORM BACTERIA WERE FOUND ON CULTURE PLATE.

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested. Liability is limited to cost of analysis.


Laboratory Manager

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO & ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILlich
SOURCE -: EF 3

DATE COLLECTED - - -03/20/89
TIME COLLECTED - - -
DATE RECEIVED - - - 03/21/89
DATE REPORTED - - - 04/05/89
SUBMITTED : JOHN ZILlich

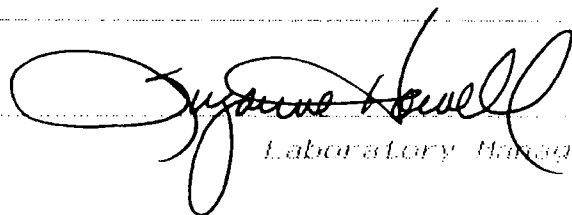
LAB SAMPLE NUMBER - 7251

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
TOTAL COLIFORM	** <1	03/21/89	KS
CHEMICAL OXYGEN DEMAND	20.0	03/31/89	RC
BARIUM	0.2	04/04/89	DM
COPPER	<0.01	03/21/89	SH
IRON (DISS.)	7.90	03/28/89	SH
MANGANESE (DISS.)	1.13	03/21/89	SH
ZINC (DISS.)	0.069	03/28/89	SH

COMMENTS: ** NO COLIFORM BACTERIA WERE FOUND ON CULTURE PLATE.

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested. Liability is limited to cost of analysis.


Laboratory Manager

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO & ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILLICH
SOURCE -: JUB 2

DATE COLLECTED - - -03/20/89
TIME COLLECTED - - -
DATE RECEIVED - - - 03/21/89
DATE REPORTED - - - 04/05/89
SUBMITTED : JOHN ZILLICH

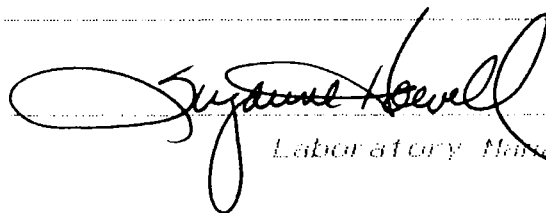
LAB SAMPLE NUMBER - 7252

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
TOTAL COLIFORM	** <1	03/21/89	KS
CHEMICAL OXYGEN DEMAND	4.0	03/31/89	RC
BARIUM	0.1	04/04/89	DM
COPPER	<0.01	03/21/89	SH
IRON (DISS.)	0.23	03/28/89	SH
MANGANESE (DISS.)	0.01	03/21/89	SH
ZINC (DISS.)	0.022	03/28/89	SH

COMMENTS: ** NO COLIFORM BACTERIA WERE FOUND ON CULTURE PLATE.

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested. Liability is limited to cost of analysis.


Laboratory Manager

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO & ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352
ATTENTION: JOHN ZILlich
SOURCE -: JUB 4

DATE COLLECTED - - -03/20/89
TIME COLLECTED - - -
DATE RECEIVED - - - 03/21/89
DATE REPORTED - - - 04/05/89
SUBMITTED : JOHN ZILlich

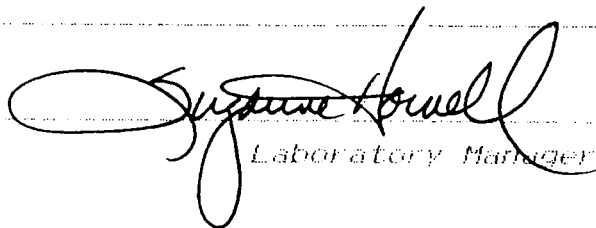
LAB SAMPLE NUMBER - 7253

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
TOTAL COLIFORM	** <1	03/21/89	KS
CHEMICAL OXYGEN DEMAND	13.0	03/31/89	RC
BARIUM	0.2	04/04/89	DM
COPPER	<0.01	03/21/89	SH
IRON (DISS.)	0.31	03/28/89	SH
MANGANESE (DISS.)	<0.01	03/21/89	SH
ZINC (DISS.)	0.014	03/28/89	SH

COMMENTS: ** NO COLIFORM BACTERIA WERE FOUND ON CULTURE PLATE.

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested. Liability is limited to cost of analysis.


Laboratory Manager

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO & ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILlich
SOURCE -: EE 2

DATE COLLECTED - - -03/20/89
TIME COLLECTED - - -
DATE RECEIVED - - - 03/21/89
DATE REPORTED - - - 04/05/89
SUBMITTED : JOHN ZILlich

LAB SAMPLE NUMBER - 7249

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
BARIUM	<0.1	04/04/89	DM
COPPER	<0.01	03/21/89	SH
IRON	0.22	03/28/89	SH
MANGANESE	<0.01	03/21/89	SH

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested. Liability is limited to cost of analysis.

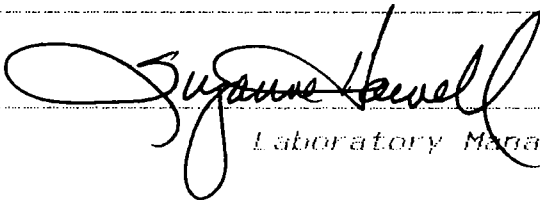

Laboratory Manager

FIG.2. 1,1,1-TRICHLOROETHANE EE2 VS JUB2.

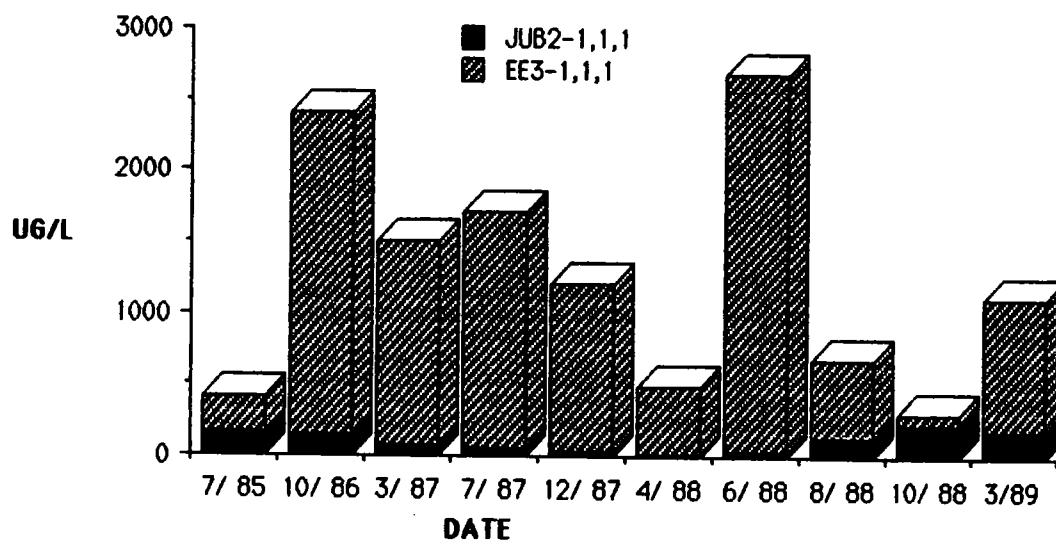
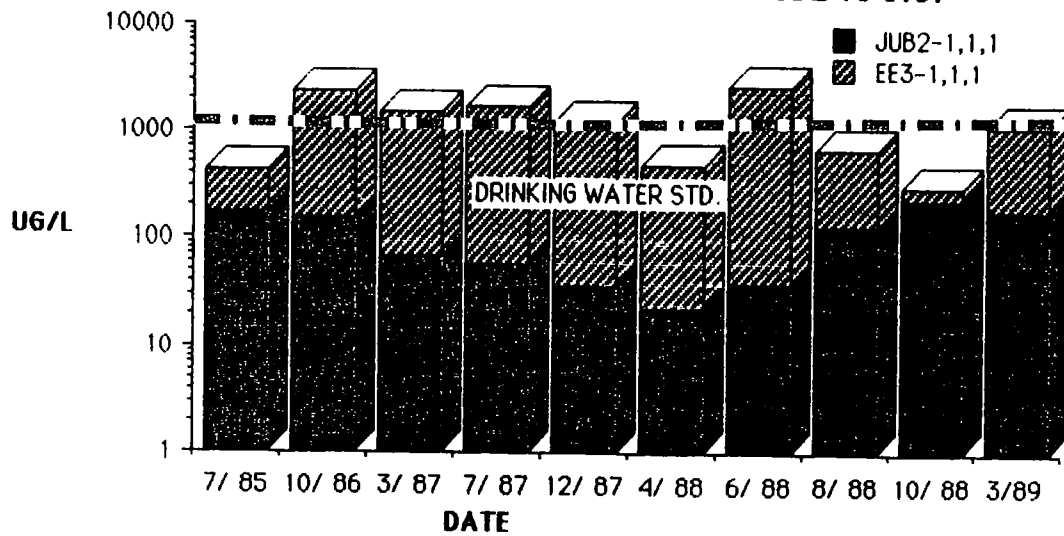
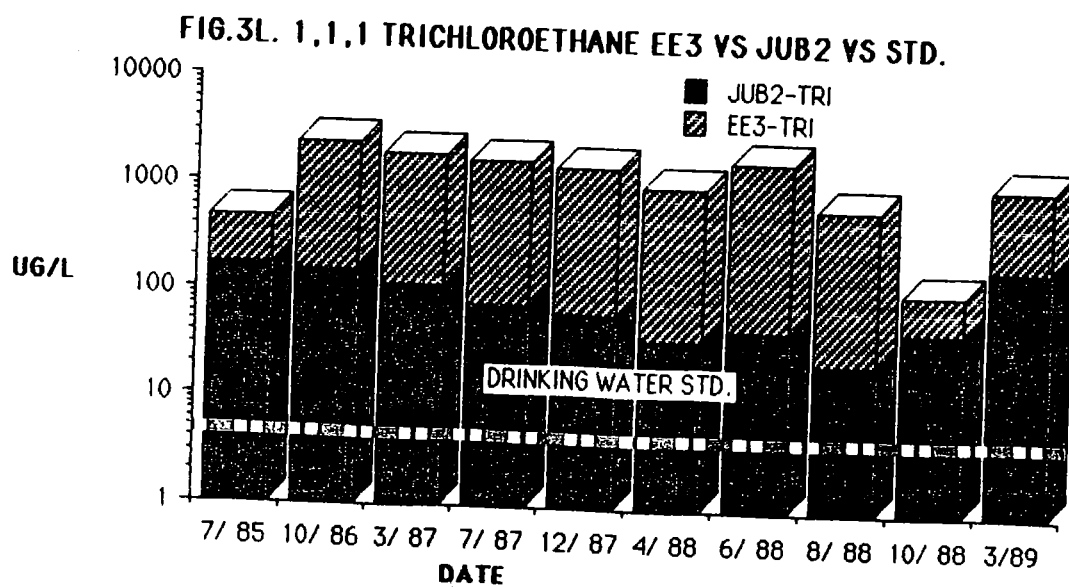
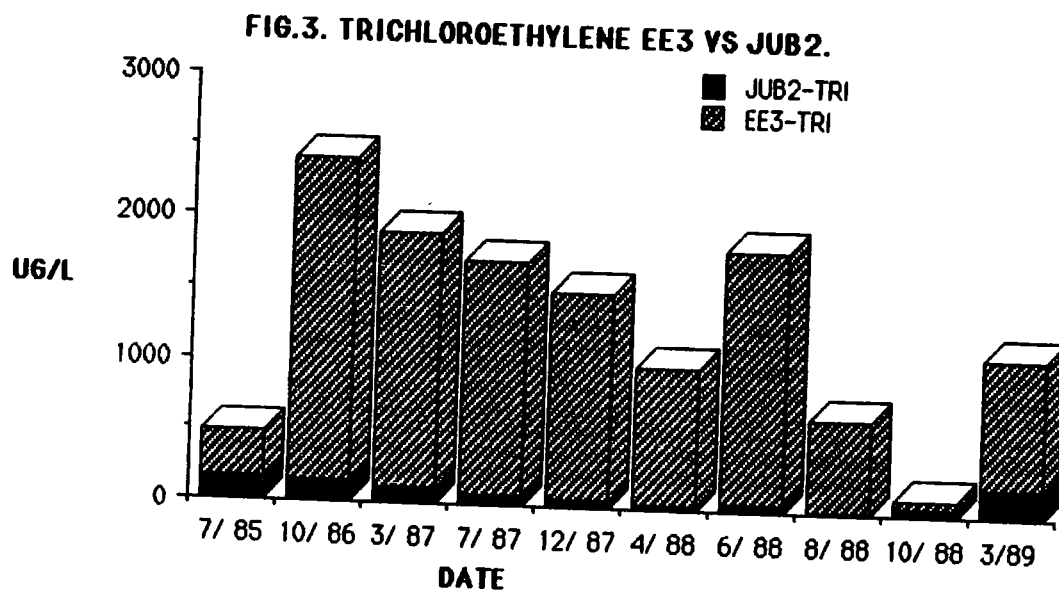
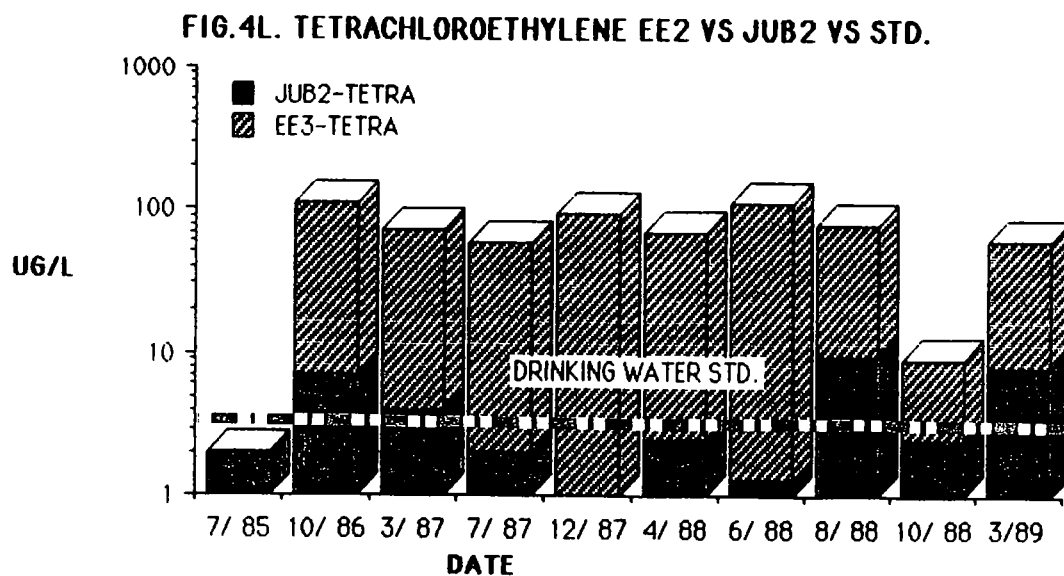
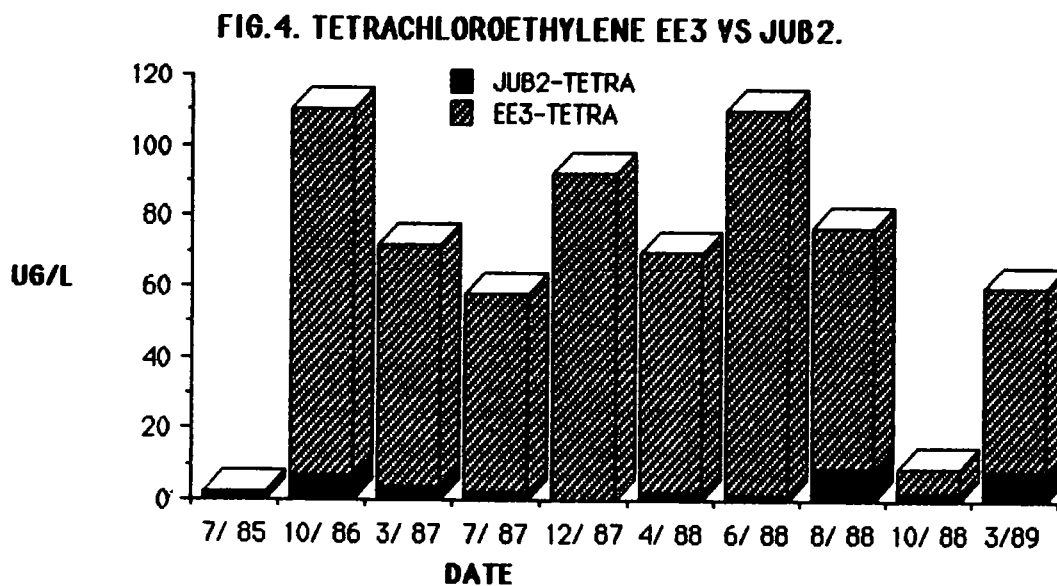


FIG.2L. 1,1,1 TRICHLOROETHANE EE3 VS JUB2 VS STD.







Technico & Enviro Services Co.

(509) 7357283

Suite 33

1776 Fowler

Richland, Wa. 99352

File Copy

Rog Cones

July 25, 1989

Mr. Cris Matthews
Solid Waste Coordinator
Environmental Quality Div.
Washington Dept. of Ecology
N. 461 Monroe Street, Suite 100
Spokane, WA 99205-1295

Subject: Groundwater Monitoring Results at the Pasco
Sanitary Landfill

Dear Mr. Matthews:

This letter provides you with the water quality monitoring results for
the second quarter of 1989.

Sincerely,



John A. Zillich

JAZ/tg

Enclosure

cc: Larry Dietrich
Larry Kamberg

PLF FIELD MEAS 6/3/89

GROUND WATER FIELD DATA SHEET								
SITE: PASCO								
DATE: 6/3/89								
WELL NO.	DATE	MEASURED AT	TOP OF CASING ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION	SPEC COND	pH	TEMP C
JUB CONTROL	6/3/89	TOP OF PVC	411.6	52.00	359.60	540	7.2	200
JUB 1	6/3/89	TOP OF PVC	417.1	68.62	348.48			
JUB 2	6/3/89	HOLE IN CAP	408.3	59.50	348.81	600	7.4	17.6
JUB 3	6/3/89	TOP OF PVC	420.4	72.73	347.67			
JUB 4	6/3/89	TOP OF PVC	393.7	40.22	353.48	640	6.7	
EE 1	6/3/89	TOP OF PIPE	417.2	57.50	359.70			
EE 2	6/3/89	HOLE IN CAP	418.9	67.31	351.56	610	7.6	18.7
EE 3	6/3/89	HOLE IN CAP	416.8	65.56	351.21	735	7	17.9
EE 4	6/3/89	TOP OF PIPE	397.6	45.84	351.76			
EE 5	6/3/89	TOP OF PIPE	407.9	54.51	353.39			
EE 6	6/3/89	TOP OF PIPE	427.0	72.35	354.65			
EE 7	6/3/89	TOP OF PIPE	425.6	71.49	354.11			
EE 8	6/3/89	TOP OF PIPE	428.4	74.12	354.28			

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO*ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99336

ATTENTION: JOHN ZILlich
SOURCE -: EE3

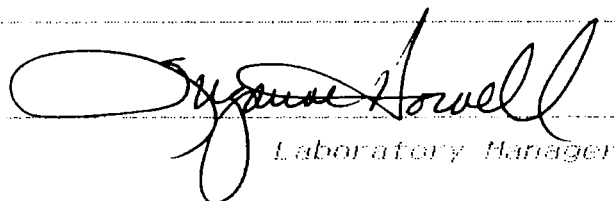
DATE COLLECTED - - -06/03/89
TIME COLLECTED - - -
DATE RECEIVED - - - 06/07/89
DATE REPORTED - - - 06/29/89
SUBMITTED : JOHN ZILlich

LAB SAMPLE NUMBER - 8575

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
CHEMICAL OXYGEN DEMAND	38.0	06/09/89	RC
BARIUM	0.1	06/29/89	DM
COPPER	<0.01	06/23/89	SH
IRON (DISS.)	0.02	06/23/89	SH
MANGANESE (DISS.)	1.05	06/23/89	SH
ZINC (DISS.)	0.008	06/26/89	SH

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested. Liability is limited to cost of analysis.


Laboratory Manager

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO*ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99336

ATTENTION: JOHN ZILLICH
SOURCE -: JUB 2

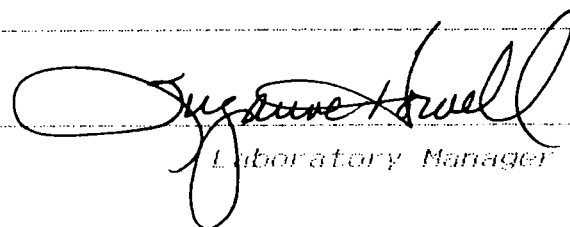
DATE COLLECTED - - -06/03/89
TIME COLLECTED - - -
DATE RECEIVED - - - 06/07/89
DATE REPORTED - - - 06/29/89
SUBMITTED : JOHN ZILLICH

LAB SAMPLE NUMBER - 8576

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
CHEMICAL OXYGEN DEMAND	6.0	06/09/89	RC
BARIUM	<0.1	06/29/89	DM
COPPER	<0.01	06/23/89	SH
IRON (DISS.)	0.01	06/23/89	SH
MANGANESE (DISS.)	<0.01	06/23/89	SH
ZINC (DISS.)	0.006	06/26/89	SH

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested. Liability is limited to cost of analysis.


Laboratory Manager

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO*ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99336

ATTENTION: JOHN ZILLICH
SOURCE -: JUB 4

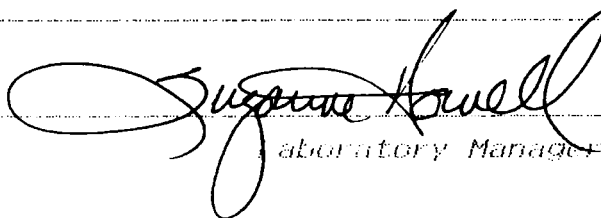
DATE COLLECTED - - -06/03/89
TIME COLLECTED - - -
DATE RECEIVED - - - 06/07/89
DATE REPORTED - - - 06/29/89
SUBMITTED : JOHN ZILLICH

LAB SAMPLE NUMBER - 8577

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
CHEMICAL OXYGEN DEMAND	10.0	06/09/89	RC
BARIUM	0.1	06/29/89	DM
COPPER	<0.01	06/23/89	SH
IRON (DISS.)	<0.01	06/23/89	SH
MANGANESE (DISS.)	<0.01	06/23/89	SH
ZINC (DISS.)	0.009	06/26/89	SH

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested. Liability is limited to cost of analysis.


Laboratory Manager

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO*ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99336

ATTENTION: JOHN ZILlich
SOURCE -: JUB CONTROL

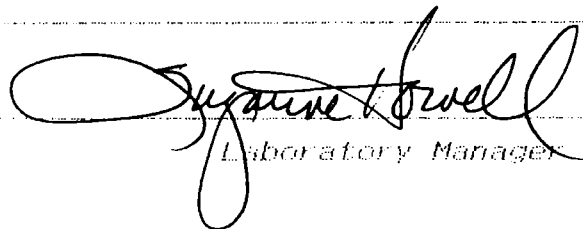
DATE COLLECTED - - -06/03/89
TIME COLLECTED - - -
DATE RECEIVED - - - 06/07/89
DATE REPORTED - - - 06/29/89
SUBMITTED : JOHN ZILlich

LAB SAMPLE NUMBER - 8578

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
CHEMICAL OXYGEN DEMAND	11.0	06/09/89	RC
BARIUM	<0.1	06/29/89	DM
COPPER	0.01	06/23/89	SH
IRON (DISS.)	0.03	06/23/89	SH
MANGANESE (DISS.)	<0.01	06/23/89	SH
ZINC (DISS.)	0.011	06/26/89	SH

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested. Liability is limited to cost of analysis.


Laboratory Manager

ALCHEM LABORATORY

104 W. 31st Street
Boise, Idaho 83714
(208)336-1172

TECHNICO - ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

DATE COLLECTED: 06/03/89
DATE RECEIVED: 06/07/89
DATE REPORTED: 06/19/89

ATTENTION: JOHN ZILlich
SOURCE: JUB 2

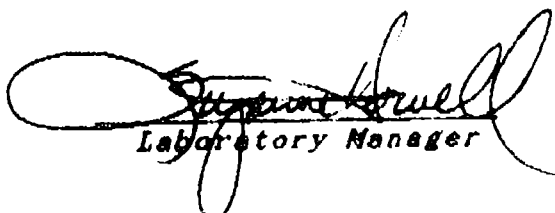
LABORATORY SAMPLE NO. - 8581

=====

ANALYSIS	RESULTS (ppb)
Vinyl Chloride	<2
1,1 Dichloroethane	39.7
Chloroform	16.1
1,1,1 Trichloroethane	85.1
Trichloroethene	107.0
Tetrachloroethene	5.9
Total Xylene	<2
1,1 Dichloroethene	16.3
trans 1,2 Dichloroethene	<2
Toluene	<2

=====

Analyst: Dale Myers


Laboratory Manager

Note: The portable bladder pump
used to sample JUB Control +
JUB 4 had a leak and was inoperable.
These wells were sampled with an
inert line. The results were as follows:

ALCHEM LABORATORY

104 W. 31st Street
Boise, Idaho 83714
(208)936-1172

TECHNICO - ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

DATE COLLECTED: 06/03/89
DATE RECEIVED: 06/07/89
DATE REPORTED: 06/19/89

ATTENTION: JOHN ZILLICH
SOURCE: EE2

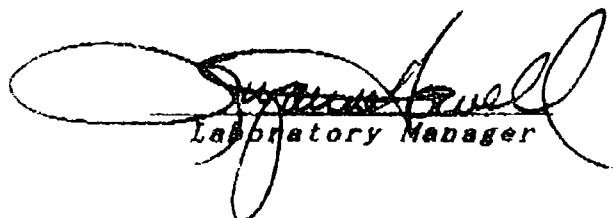
LABORATORY SAMPLE NO. - 8579

=====

ANALYSIS	RESULTS (ppb)
Vinyl Chloride	<2
1,1 Dichloroethane	20.2
Chloroform	2.3
1,1,1 Trichloroethane	50.5
Trichloroethene	52.0
Tetrachloroethene	30.6
Total Xylene	<2
1,1 Dichloroethene	10.2
trans 1,2 Dichloroethene	<2
Toluene	<2

=====

Analyst: Dale Myers


Laboratory Manager

ALCHEM LABORATORY

104 N. 31st Street
Boise, Idaho 83714
(208)336-1172

TECHNICO - ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

DATE COLLECTED: 06/03/89
DATE RECEIVED: 06/07/89
DATE REPORTED: 06/19/89

ATTENTION: JOHN ZILlich
SOURCE: BE3

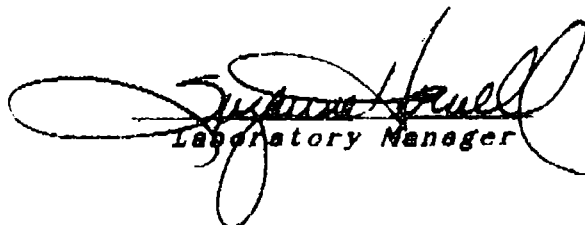
LABORATORY SAMPLE NO. - 8580

=====

ANALYSIS	RESULTS (ppb)
Vinyl Chloride	7.82
1,1 Dichloroethane	213.0
Chloroform	35.0
1,1,1 Trichloroethane	591.0
Trichloroethene	684.0
Tetrachloroethane	45.2
Total Xylene	477.0
1,1 Dichloroethene	120.0
trans 1,2 Dichloroethene	<2
Toluene	996.0

=====

Analyst: Dale Myers


Laboratory Manager

TECHNICO & ENVIRO SERVICES CO.
ANALYTICAL REPORT

CLIENT: PASCO LANDFILL
SAMPLED: 6/3/89
REPORTED: 7/20/89

LOCATION	DATE	CHLORIDE	AMMONIA	NITRITE
JUB CONRTOL	6/3/89	25.5	<0.1	<0.05
EE3	6/3/89	42.5	<0.1	<0.05
JUB2	6/3/89	30.0	<0.1	<0.05
JUB4	6/3/89	27.0	<0.1	<0.05

FIG.2. 1,1,1-TRICHLOROETHANE EE2 VS JUB2.

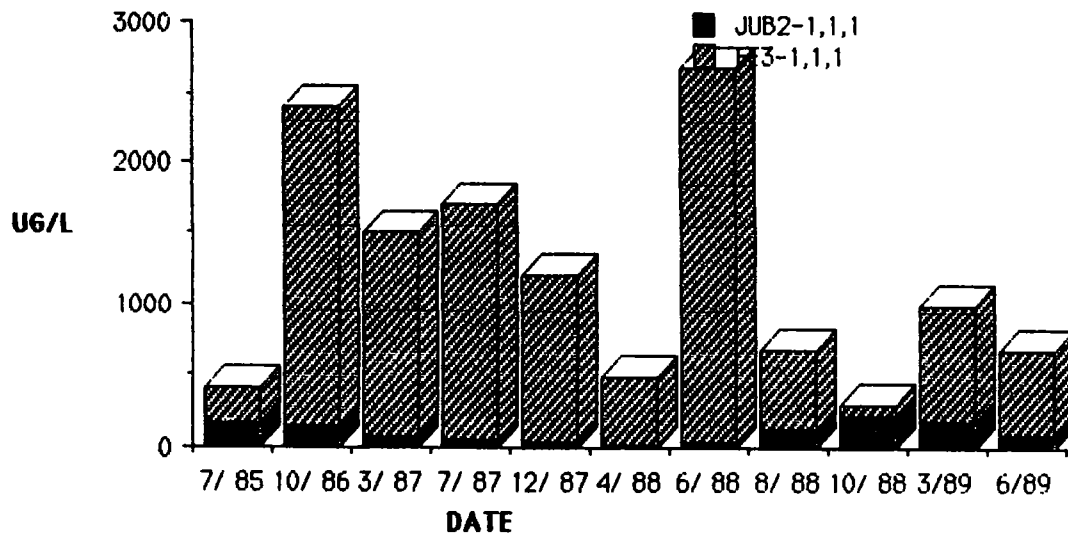


FIG.2L. 1,1,1 TRICHLOROETHANE EE2 VS JUB2 VS STD.

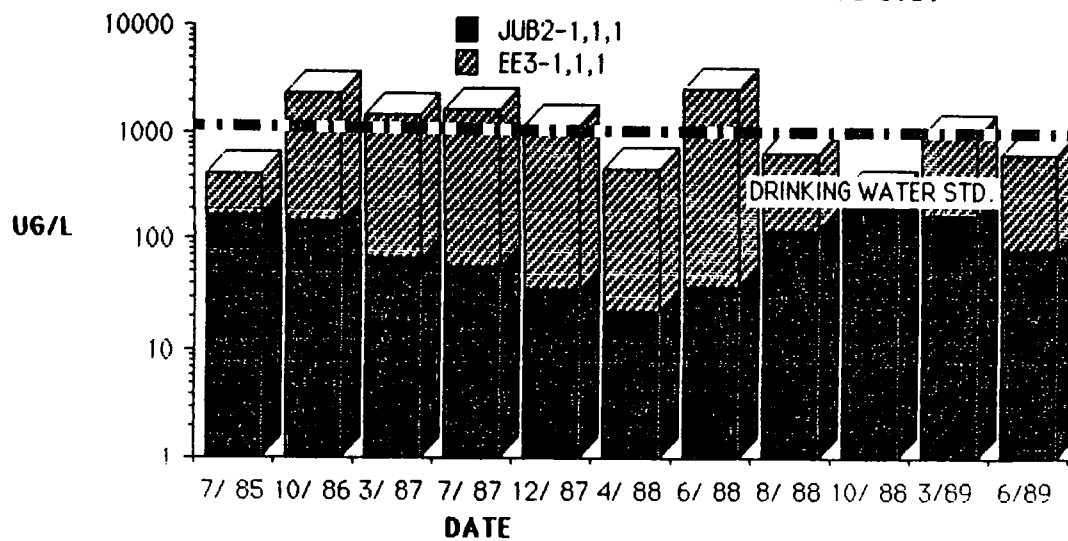


FIG.3. TRICHLOROETHYLENE EE3 VS JUB2.

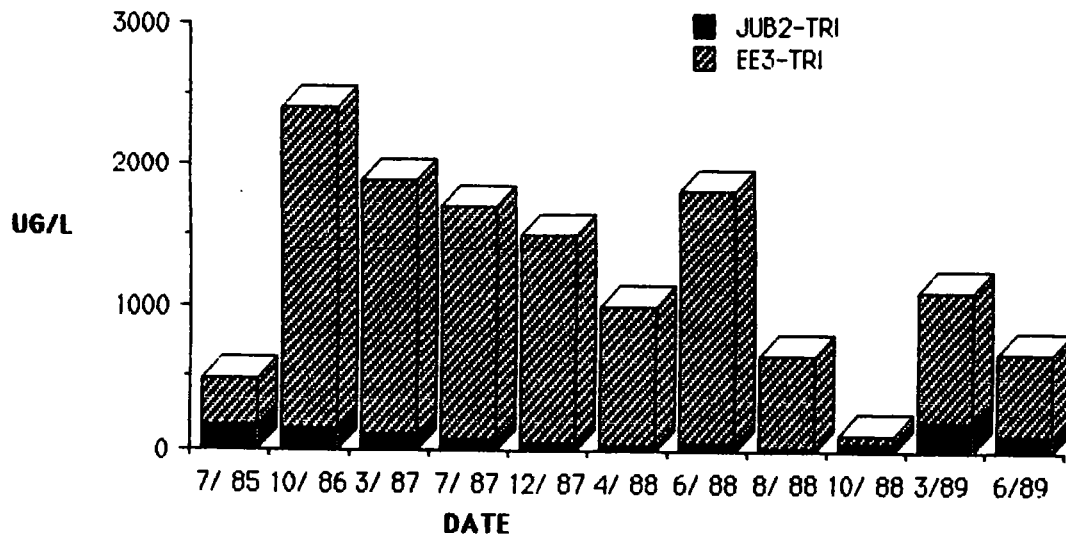


FIG.3L. TRICHLOROETHYLENE EE3 VS JUB2 VS STD.

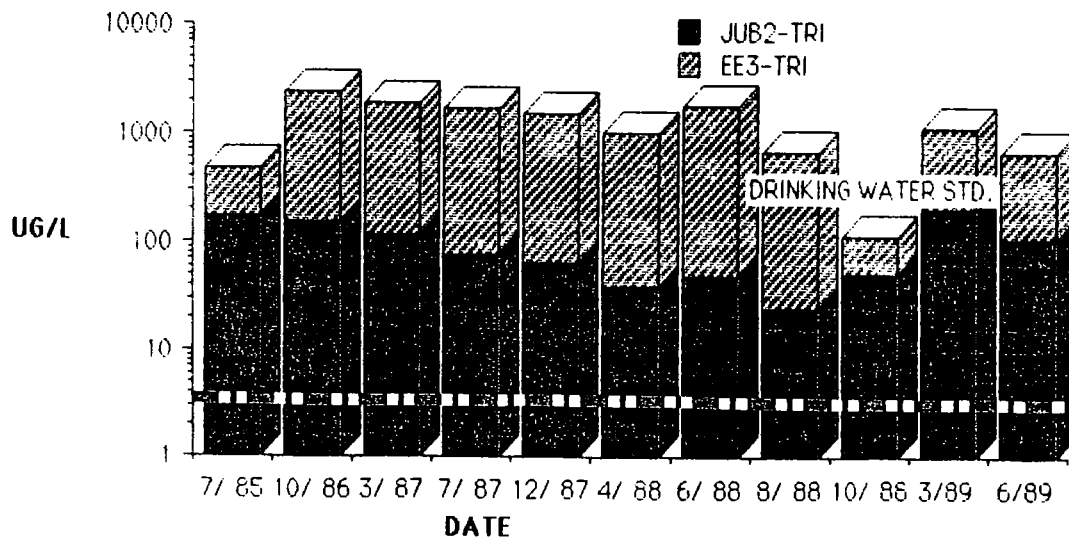


FIG.4. TETRACHLOROETHYLENE EE3 VS JUB2.

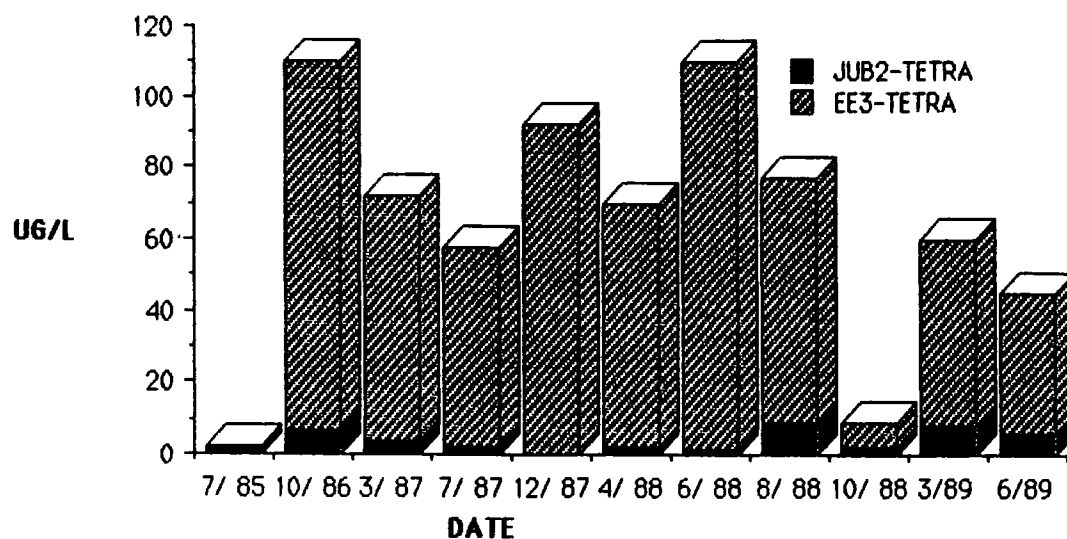
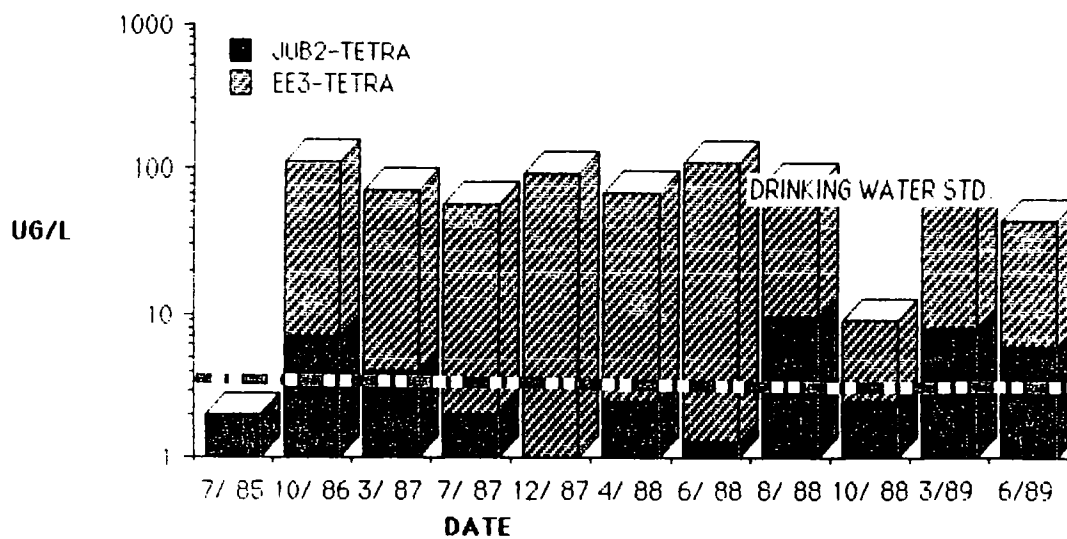


FIG.4L. TETRACHLOROETHYLENE EE2 VS JUB2 VS STD.



Technico & Enviro Services Co.

Project E
File

(509) 735-7283

Suite 33

1776 Fowler

Richland, WA 99352

October 30, 1989

Mr. Cris Matthews
Solid Waste Coordinator
Environmental Quality Div.
Washington Dept. of Ecology
N. 461 Monroe Street, Suite 100
Spokane, WA 99205-1295

Subject: **Groundwater Monitoring Results at the Pasco
Sanitary Landfill**

Dear Mr. Matthews:

This letter provides you with the water quality monitoring results for wells requiring annual sampling plus the routine 3rd quarter sampling results.

Sincerely,


John A. Zillich

JAZ:tg

enclosures

cc: Larry Dietrich
Larry Kamberg



**ANALYTICAL
RESOURCES
INCORPORATED**

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, Wa 98109-5187
(206) 621-6490

ORGANICS ANALYSIS DATA SHEET - METHOD 8150

Lab Sample ID: 1004MB
Matrix: Water

Client Sample ID : Method Blank
Client: Technical Env. Services
Project No: 88-21
VTSR: 10/03/89

Date Extracted: 10/4/89
Date Analyzed: 10/11/89
Volume Extracted: 100 ml.
Conc/Dil Factor: 1 to 5

Data Release Authorized: Peter M. Kipley
Report prepared on MAC:C C.P.G. 10/25/89

CAS Number		µg/L
93-72-1	Silvex (2,4,5-TP)	0.2 U
93-76-5	2,4,5-T	2.0 U
88-85-7	Dinoseb	0.4 U
1918-00-9	Dicamba	0.3 U
120-36-5	Dichlorprop	1.0 U
94-75-7	2,4-D	2.0 U
94-82-6	2,4-DB	2.0 U
75-99-0	Dalapon	40 U
7085-19-0	MCPP	250 U
94-74-6	MCPA	NA

* Herbicide Surrogate Recovery

2,3-Dichlorophenoxyacetic acid	95%
--------------------------------	-----

Data Qualifiers

- U Indicates compound was analyzed for but not detected at the given detection limit.
- J Indicates an estimated value when the result is less than the calculated detection limit.
- NA Indicates compounds were not analyzed for.



**ANALYTICAL
RESOURCES
INCORPORATED**

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, Wa 98109-5187
(206) 621-6490

ORGANICS ANALYSIS DATA SHEET - METHOD 8150

Lab Sample ID: 3774 D
Matrix: Water

Client Sample ID : EE5
Client: Technical Env. Services
Project No: 88-21
VTSR: 10/03/89

Date Extracted: 10/4/89
Date Analyzed: 10/11/89
Volume Extracted: 100 ml.
Conc/Dil Factor: 1 to 5

Data Release Authorized: Peter M. Kepler
Report prepared on MAC:C C.P.G. 10/25/89

CAS Number		µg/L
93-72-1	Silvex (2,4,5-TP)	0.2 U
93-76-5	2,4,5-T	2.0 U
88-85-7	Dinoseb	0.4 U
1918-00-9	Dicamba	0.3 U
120-36-5	Dichlorprop	1.0 U
94-75-7	2,4-D	2.0 U
94-82-6	2,4-DB	2.0 U
75-99-0	Dalapon	40 U
7085-19-0	MCP	250 U
94-74-6	MCPA	NA

*** Herbicide Surrogate Recovery**

2,3-Dichlorophenoxyacetic acid	109%
--------------------------------	------

Data Qualifiers

- U Indicates compound was analyzed for but not detected at the given detection limit.
- J Indicates an estimated value when the result is less than the calculated detection limit.
- NA Indicates compounds were not analyzed for.



**ANALYTICAL
RESOURCES
INCORPORATED**

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, Wa 98109-5187
(206) 621-6490

ORGANICS ANALYSIS DATA SHEET - METHOD 8150

Lab Sample ID: 3774 A
Matrix: Water

Client Sample ID : EE2
Client: Technical Env. Services
Project No: 88-21
VTSR: 10/03/89

Date Extracted: 10/4/89
Date Analyzed: 10/11/89
Volume Extracted: 100 ml.
Conc/Dil Factor: 1 to 5

Data Release Authorized: 

Report prepared on MAO:O O.P.G. 10/25/89

CAS Number		µg/L
93-72-1	Silvex (2,4,5-TP)	0.2 U
93-76-5	2,4,5-T	2.0 U
88-85-7	Dinoseb	0.4 U
1918-00-9	Dicamba	0.3 U
120-36-5	Dichlorprop	1.0 U
94-75-7	2,4-D	2.0 U
94-82-6	2,4-DB	2.0 U
75-99-0	Dalapon	40 U
7085-19-0	MCP	250 U
94-74-6	MCPA	NA

*** Herbicide Surrogate Recovery**

2,3-Dichlorophenoxyacetic acid	112%
--------------------------------	------

Data Qualifiers

- U Indicates compound was analyzed for but not detected at the given detection limit.
- J Indicates an estimated value when the result is less than the calculated detection limit.
- NA Indicates compounds were not analyzed for.



**ANALYTICAL
RESOURCES
INCORPORATED**

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, Wa 98109-5187
(206) 621-6490

ORGANICS ANALYSIS DATA SHEET - METHOD 8150

Lab Sample ID: 3774 B
Matrix: Water

Client Sample ID : EE3
Client: Technical Env. Services
Project No: 88-21
VTSR: 10/03/89

Date Extracted: 10/4/89
Date Analyzed: 10/11/89
Volume Extracted: 100 ml.
Conc/Dil Factor: 1 to 5

Data Release Authorized. *Pete M. Kople*
Report prepared on MAC:C C.P.G. 10/25/89

CAS Number		µg/L
93-72-1	Silvex (2,4,5-TP)	0.2 U
93-76-5	2,4,5-T	2.0 U
88-85-7	Dinoseb	0.4 U
1918-00-9	Dicamba	0.3 U
120-36-5	Dichlorprop	1.0 U
94-75-7	2,4-D	2.0 U
94-82-6	2,4-DB	2.0 U
75-99-0	Dalapon	40 U
7085-19-0	MCPP	250 U
94-74-6	MCPA	NA

*** Herbicide Surrogate Recovery**

2,3-Dichlorophenoxyacetic acid	113%
--------------------------------	------

Data Qualifiers

- U Indicates compound was analyzed for but not detected at the given detection limit.
- J Indicates an estimated value when the result is less than the calculated detection limit.
- NA Indicates compounds were not analyzed for.



**ANALYTICAL
RESOURCES
INCORPORATED**

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, Wa 98109-5187
(206) 621-6490

ORGANICS ANALYSIS DATA SHEET - METHOD 8150

Lab Sample ID: 3774 C
Matrix: Water

Client Sample ID : EE4
Client: Technical Env. Services
Project No: 88-21
VTSR: 10/03/89

Date Extracted: 10/4/89
Date Analyzed: 10/11/89
Volume Extracted: 100 ml.
Conc/Dil Factor: 1 to 5

Data Release Authorized: 
Report prepared on MAC:C C.P.G. 10/25/89

CAS Number		µg/L
93-72-1	Silvex (2,4,5-TP)	0.2 U
93-76-5	2,4,5-T	2.0 U
88-85-7	Dinoseb	0.4 U
1918-00-9	Dicamba	0.3 U
120-36-5	Dichlorprop	1.0 U
94-75-7	2,4-D	2.0 U
94-82-6	2,4-DB	2.0 U
75-99-0	Dalapon	40 U
7085-19-0	MOPP	250 U
94-74-6	MCPA	NA

*** Herbicide Surrogate Recovery**

2,3-Dichlorophenoxyacetic acid	109%
--------------------------------	------

Data Qualifiers

- U Indicates compound was analyzed for but not detected at the given detection limit.
- J Indicates an estimated value when the result is less than the calculated detection limit.
- NA Indicates compounds were not analyzed for.

					GROUND WATER			
SITE: PASCO					DATA SHEET			
DATE: 9/89								
WELL NO.	DATE	MEASURED AT	TOP OF CASING ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION	SPEC COND	pH	TEMP C
JUB CONTROL	9/28/89	TOP OF PVC	411.6	54.80	356.80	608	7.45	18.9
JUB 1	9/29/89	TOP OF PVC	417.1	70.00	347.10			
JUB 2	9/28/89	HOLE IN CAP	408.3	60.98	347.33	663	6.8	17.4
JUB 3	9/29/89	TOP OF PVC	420.4	74.23	346.17			
JUB 4	9/28/89	TOP OF PVC	393.7	41.75	351.95	663	7.3	17.4
IE 1	9/29/89	TOP OF PIPE	417.2	60.26	356.94			
IE 2	9/28/89	HOLE IN CAP	418.9	67.29	351.58		6.9	17.3
IE 3	9/28/89	HOLE IN CAP	416.8	64.80	351.97	829	6.7	19.0
IE 4	9/29/89	TOP OF PIPE	397.6	45.02	352.58			
IE 5	9/29/89	TOP OF PIPE	407.9	56.50	351.40			
IE 6	9/29/89	TOP OF PIPE	427.0	74.24	352.76			
IE 7	9/29/89	TOP OF PIPE	425.6	73.43	352.17			
IE 8	9/29/89	TOP OF PIPE	428.4	74.64	353.76			



**ANALYTICAL
RESOURCES
INCORPORATED**

10 October, 1989

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, Wa 98109-5187
(206) 621-6490

John Zillie
Technical Environmental Services
1776 Fowler Suite 33
Richland, WA 99352

**RE: Project ID:88-4; Samples submitted for TOC analysis;
ARI Job No. 3775.**

Dear Mr. Zillie:

Please find enclosed the TOC data for the above referenced project.

If you have any questions or require additional information, please do not
hesitate to call at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Catherine P. Greer
Project Coordinator

cpg

enclosures
cc: file #03775



**ANALYTICAL
RESOURCES
INCORPORATED**

Analytical
Chemists &
Consultants

333 Ninth Ave. North
Seattle, Wa 98109-5187
(206) 621-6490

ORGANICS ANALYSIS DATA SHEET - Method 9060

Matrix: Waters

Project: 88-4
QC Report No: 3775-T.E.S.
Date Received: 10/03/89

Data Release Authorized: Bryan D. Anderson
Report Prepared 10/10/89 - MAC:C C.P.G.

Date of Analysis: 10/04/89

Lab ID	Sample No	Dilution Factor	Detected ppm C \pm Std Dev	% SD	TOC (ppm C) dil*ppm detected
1 Blank #1	System Blank#1	1	0.187 \pm 0.019	10	0.2
2 Blank #2	System Blank#2	1	0.171 \pm 0.020	12	0.2
3 3775 A	EE2	1	1.26 \pm 0.069	5.5	1.3
4 3775 B	EE3	1	1.87 \pm 0.075	4.0	1.9
5 3775 C	JUB Control	1	1.61 \pm 0.105	6.5	1.6
6 3775 D	JUB-4	1	1.66 \pm 0.115	6.9	1.7

QA/QC Runs:		Detected		
		ppm C \pm Std Dev	% SD	
Cali Check #1	5.0 ppm KHP#1	4.85 \pm 0.175	3.6	
Cali Check #2	5.0 ppm KHP#2	4.73 \pm 0.242	5.1	

Calibration: One 5.0 ppm C calibration
run each 15 samples
[Potassium Hydrogen Phthalate]

Analysis performed with a Dohrman DC180 Analyzer
in non-Purgeable Organic Carbon Mode,
using the persulfate-UV oxidation method.

QA/QC: One "Cold Blank" and one
system blank per calibration

Ten mls of sample is acidified with phosphoric acid and
purged for 10 minutes. Four 1.0 ml aliquots of each
sample are analyzed, and the average and standard
deviation reported for each sample.

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO AND ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILlich
SOURCE -: JUB CONTROL

DATE COLLECTED - - -09/28/89
TIME COLLECTED - - -
DATE RECEIVED - - - 09/29/89
DATE REPORTED - - - 10/13/89
SUBMITTED : JOHN ZILlich

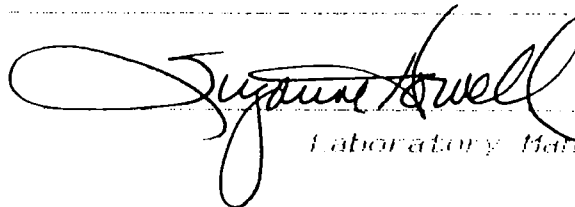
LAB SAMPLE NUMBER - 10588

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
TOTAL COLIFORM	** <1	09/29/89	KS
CHEMICAL OXYGEN DEMAND	<5.0	10/05/89	KS
CHLORIDE	26.2	09/29/89	DM
NITRATE as N	6.96	09/29/89	DM
SULFATE	63.2	09/29/89	DM
CONDUCTIVITY (umhos/cm)	608.0	10/10/89	JR
AMMONIA as N	<0.05	10/13/89	KS
BARIUM	<0.1	10/04/89	DM
COPPER	<0.01	10/10/89	SH
IRON	0.15	10/10/89	SH
MANGANESE	0.01	10/10/89	SH
IRON (DISS.)	0.02	10/10/89	SH
MANGANESE (DISS.)	<0.01	10/10/89	SH
ZINC (DISS.)	0.032	10/10/89	SH

COMMENTS: ** NO COLIFORM BACTERIA WERE FOUND ON CULTURE PLATE.
NITRITE as N - -: <0.5

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested and no interpretation is intended or implied.



Laboratory Manager

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO AND ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILlich
SOURCE -: JUB 4

DATE COLLECTED - - -09/28/89
TIME COLLECTED - - -9:40 AM
DATE RECEIVED - - - 09/29/89
DATE REPORTED - - - 10/13/89
SUBMITTED : JOHN ZILlich

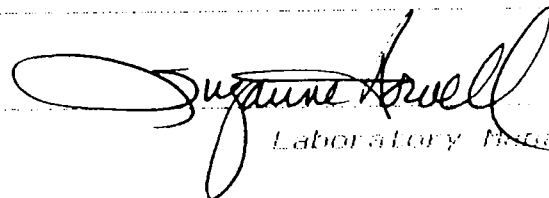
LAB SAMPLE NUMBER - 10589

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
TOTAL COLIFORM	** <1	09/29/89	KS
CHEMICAL OXYGEN DEMAND	<5.0	10/05/89	KS
CHLORIDE	26.0	09/29/89	DM
NITRATE as N	6.77	09/29/89	DM
SULFATE	61.9	09/29/89	DM
CONDUCTIVITY (umhos/cm)	663.0	10/10/89	JR
AMMONIA as N	<0.05	10/13/89	KS
BARIUM	<0.1	10/04/89	DM
COPPER	<0.01	10/10/89	SH
IRON	0.04	10/10/89	SH
MANGANESE	<0.01	10/10/89	SH
IRON (DISS.)	0.01	10/10/89	SH
MANGANESE (DISS.)	<0.01	10/10/89	SH
ZINC (DISS.)	0.014	10/10/89	SH

COMMENTS: ** NO COLIFORM BACTERIA WERE FOUND ON CULTURE PLATE.
NITRITE as N -: <0.5

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested and no interpretation is intended or implied.


Laboratory Manager

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO AND ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILlich
SOURCE -: JUB 2

DATE COLLECTED - - -09/28/89
TIME COLLECTED - - -
DATE RECEIVED - - - 09/29/89
DATE REPORTED - - - 10/13/89
SUBMITTED : JOHN ZILlich

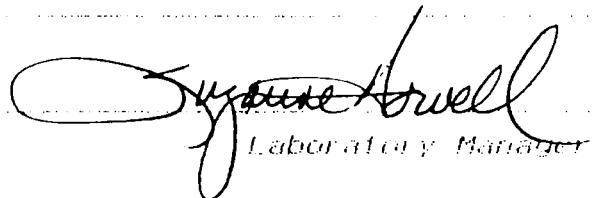
LAB SAMPLE NUMBER - 10590

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
CHEMICAL OXYGEN DEMAND	33.0	10/05/89	KS
CHLORIDE	36.3	10/13/89	KS
NITRATE as N	6.94	10/05/89	KS
SULFATE	65.6	10/13/89	KS
CONDUCTIVITY (umhos/cm)	663.0	10/10/89	JR
AMMONIA as N	<0.05	10/13/89	KS
BARIUM	<0.1	10/12/89	DM
COPPER	<0.01	10/10/89	SH
IRON	0.02	10/10/89	SH
MANGANESE	0.01	10/10/89	SH
IRON (DISS.)	0.02	10/10/89	SH
MANGANESE (DISS.)	0.01	10/10/89	SH
ZINC (DISS.)	0.019	10/10/89	SH

COMMENTS: NITRITE as N - -: <0.5

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested and no interpretation is intended or implied.


Laboratory Manager

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO AND ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILlich
SOURCE -: EE 3

DATE COLLECTED - - -09/28/89
TIME COLLECTED - - -
DATE RECEIVED - - - 09/29/89
DATE REPORTED - - - 10/13/89
SUBMITTED : JOHN ZILlich

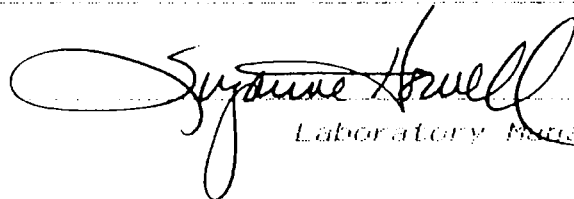
LAB SAMPLE NUMBER - 10591

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
TOTAL COLIFORM	** <1	09/29/89	KS
CHEMICAL OXYGEN DEMAND	13.0	10/05/89	KS
CHLORIDE	39.2	09/29/89	DM
NITRATE as N	0.29	09/29/89	DM
SULFATE	65.2	09/29/89	DM
CONDUCTIVITY (umhos/cm)	829.0	10/10/89	JR
AMMONIA as N	<0.05	10/13/89	KS
BARIUM	0.1	10/04/89	DM
COPPER	<0.01	10/10/89	SH
IRON	10.8	10/10/89	SH
MANGANESE	1.12	10/10/89	SH
IRON (DISS.)	0.12	10/10/89	SH
MANGANESE (DISS.)	1.04	10/10/89	SH
ZINC (DISS.)	0.026	10/10/89	SH

COMMENTS: ** NO COLIFORM BACTERIA WERE FOUND ON CULTURE PLATE.
NITRITE as N - - - <0.5

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested and no interpretation is intended or implied.


Laboratory Manager

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO AND ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILLICH
SOURCE -: EE 2

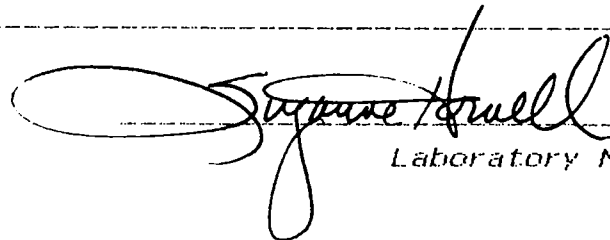
DATE COLLECTED - - -09/28/89
TIME COLLECTED - - -2:37 PM
DATE RECEIVED - - - 09/29/89
DATE REPORTED - - - 10/11/89
SUBMITTED : JOHN ZILLICH

LAB SAMPLE NUMBER - 10593

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
BARIUM	<0.1	10/04/89	DM
COPPER	<0.01	10/10/89	SH
IRON	0.06	10/10/89	SH
MANGANESE	<0.01	10/10/89	SH

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested and no interpretation is intended or implied.



Laboratory Manager

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO AND ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILlich
SOURCE -: WSW

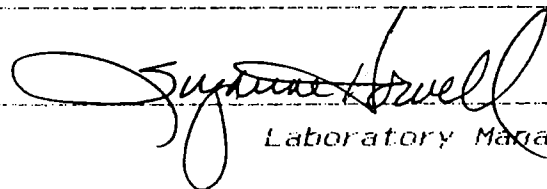
DATE COLLECTED - - -09/28/89
TIME COLLECTED - - -
DATE RECEIVED - - - 10/05/89
DATE REPORTED - - - 10/12/89
SUBMITTED : JOHN ZILlich

LAB SAMPLE NUMBER - 10747

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
BARIUM	<0.1	10/12/89	DM
COPPER	<0.01	10/10/89	SH
IRON	0.02	10/10/89	SH
MANGANESE	<0.01	10/10/89	SH

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested and no interpretation is intended or implied.


Laboratory Manager

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO AND ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILlich
SOURCE -: EEB

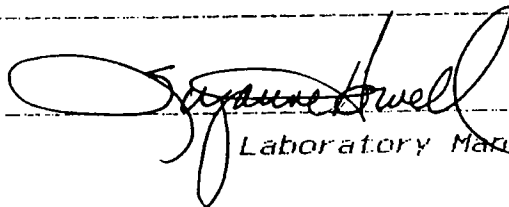
DATE COLLECTED - - -09/28/89
TIME COLLECTED - - -10:40 AM
DATE RECEIVED - - - 10/05/89
DATE REPORTED - - - 10/12/89
SUBMITTED : JOHN ZILlich

LAB SAMPLE NUMBER - 10746

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
BARIUM	0.1	10/12/89	DM
COPPER	<0.01	10/10/89	SH
IRON	0.02	10/10/89	SH
MANGANESE	<0.01	10/10/89	SH

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested and no interpretation is intended or implied.


Laboratory Manager

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO AND ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILlich
SOURCE -: EE7

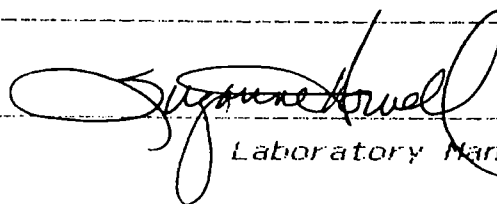
DATE COLLECTED - - -09/28/89
TIME COLLECTED - - -9:11 AM
DATE RECEIVED - - - 10/05/89
DATE REPORTED - - - 10/12/89
SUBMITTED : JOHN ZILlich

LAB SAMPLE NUMBER - 10745

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
BARIUM	0.1	10/12/89	DM
COPPER	<0.01	10/10/89	SH
IRON	0.22	10/10/89	SH
MANGANESE	0.01	10/10/89	SH

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested and no interpretation is intended or implied.



Laboratory Manager

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO AND ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILLICH
SOURCE -: EE6

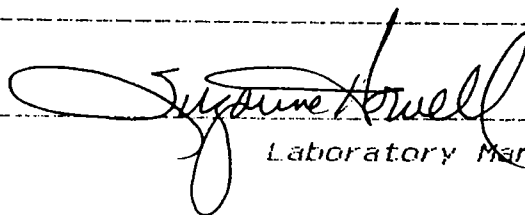
DATE COLLECTED - - -09/28/89
TIME COLLECTED - - -
DATE RECEIVED - - - 10/05/89
DATE REPORTED - - - 10/12/89
SUBMITTED : JOHN ZILLICH

LAB SAMPLE NUMBER - 10744

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
BARIUM	0.1	10/12/89	DM
COPPER	0.03	10/10/89	SH
IRON	2.48	10/10/89	SH
MANGANESE	0.10	10/10/89	SH

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested and no interpretation is intended or implied.



Laboratory Manager

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO AND ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILLICH
SOURCE -: EE5

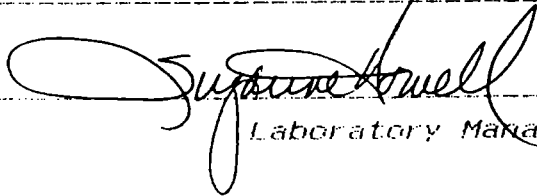
DATE COLLECTED - - -09/28/89
TIME COLLECTED - - -2:40 PM
DATE RECEIVED - - - 10/05/89
DATE REPORTED - - - 10/12/89
SUBMITTED : JOHN ZILLICH

LAB SAMPLE NUMBER - 10743

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
BARIUM	0.1	10/12/89	DM
COPPER	<0.01	10/10/89	SH
IRON	0.01	10/10/89	SH
MANGANESE	<0.01	10/10/89	SH

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested and no interpretation is intended or implied.


Laboratory Manager

ALCHEM LABORATORY

104 West 31st Street
Boise, Idaho 83714
(208) 336-1172

LABORATORY REPORT

TECHNICO AND ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

ATTENTION: JOHN ZILLICH
SOURCE -: EE4

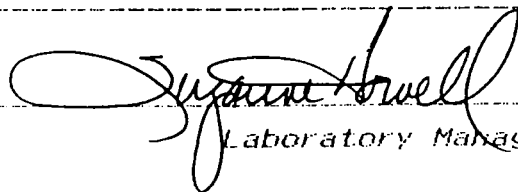
DATE COLLECTED - - -09/28/89
TIME COLLECTED - - -
DATE RECEIVED - - - 10/05/89
DATE REPORTED - - - 10/12/89
SUBMITTED : JOHN ZILLICH

LAB SAMPLE NUMBER - 10742

Results reported unless noted: (Chemistry Analysis as mg/l) (Bacteria as organisms/100 ml)

ANALYSIS	RESULTS	DATE ANALYZED	ANALYST
BARIUM	0.1	10/12/89	DM
COPPER	<0.01	10/10/89	SH
IRON	0.01	10/10/89	SH
MANGANESE	0.01	10/10/89	SH

This report for the exclusive use of the client(s) to whom it is addressed. Its disclosure to others for use in advertising is not authorized. These results refer only to the specific sample tested and no interpretation is intended or implied.


Laboratory Manager

ALCHEM LABORATORY

104 W. 31st Street
Boise, Idaho 83714
(208)336-1172

TECHNICO - ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

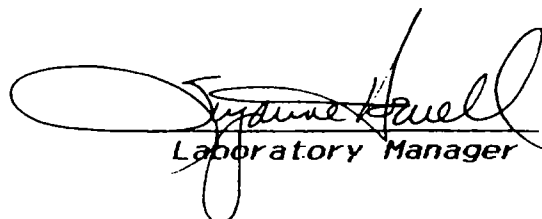
DATE COLLECTED: 09/28/89
TIME COLLECTED: 12:30 PM
DATE RECEIVED: 09/29/89
DATE REPORTED: 10/26/89

ATTENTION: JOHN ZILLICH
SOURCE: JUB 2

LABORATORY SAMPLE NO. - 10592

ANALYSIS	RESULTS (ppb)
Vinyl Chloride	<2
1,1 Dichloroethane	73.8
Chloroform	33.1
1,1,1 Trichloroethane	134.0
Trichloroethene	166.0
Tetrachloroethene	9.8
Total Xylene	<2
1,1 Dichloroethene	37.3
trans 1,2 Dichloroethene	<2
Toluene	<2

Analyst: Dale Myers


Laboratory Manager

ALCHEM LABORATORY

104 W. 31st Street
Boise, Idaho 83714
(208)336-1172

TECHNICO - ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

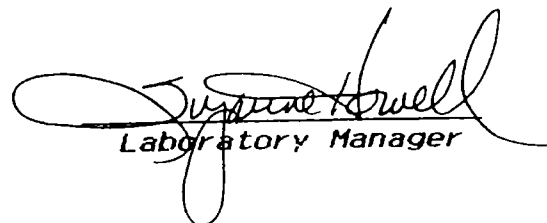
DATE COLLECTED: 10/03/89
TIME COLLECTED:
DATE RECEIVED: 10/04/89
DATE REPORTED: 10/26/89

ATTENTION: JOHN ZILlich
SOURCE: EE 8

LABORATORY SAMPLE NO. - 10718

ANALYSIS	RESULTS (ppb)
Vinyl Chloride	<2
1,1 Dichloroethane	<2
Chloroform	<2
1,1,1 Trichloroethane	<2
Trichloroethene	<2
Tetrachloroethene	<2
Total Xylene	<2
1,1 Dichloroethene	<2
trans 1,2 Dichloroethene	<2
Toluene	<2

Analyst: Dale Myers


Laboratory Manager

ALCHEM LABORATORY

104 W. 31st Street
Boise, Idaho 83714
(208)336-1172

TECHNICO - ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

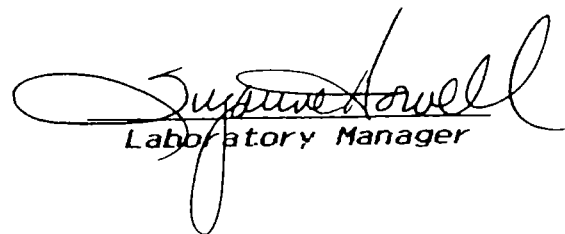
DATE COLLECTED: 10/03/89
TIME COLLECTED:
DATE RECEIVED: 10/04/89
DATE REPORTED: 10/26/89

ATTENTION: JOHN ZILLICH
SOURCE: EE 7

LABORATORY SAMPLE NO. - 10717

ANALYSIS	RESULTS (ppb)
Vinyl Chloride	<2
1,1 Dichloroethane	<2
Chloroform	<2
1,1,1 Trichloroethane	<2
Trichloroethene	<2
Tetrachloroethene	<2
Total Xylene	<2
1,1 Dichloroethene	<2
trans 1,2 Dichloroethene	<2
Toluene	<2

Analyst: Dale Myers


Laboratory Manager

ALCHEM LABORATORY

104 W. 31st Street
Boise, Idaho 83714
(208)336-1172

TECHNICO - ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

DATE COLLECTED: 10/03/89
TIME COLLECTED:
DATE RECEIVED: 10/04/89
DATE REPORTED: 10/26/89

ATTENTION: JOHN ZILlich
SOURCE: EE 6

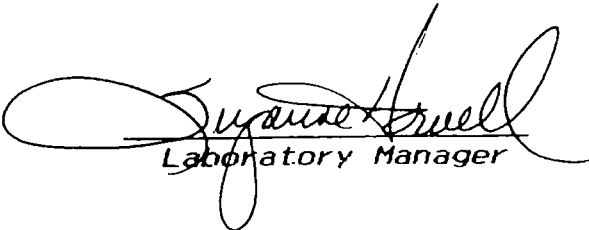
LABORATORY SAMPLE NO. - 10716

=====

ANALYSIS	RESULTS (ppb)
Vinyl Chloride	<2
1,1 Dichloroethane	<2
Chloroform	<2
1,1,1 Trichloroethane	<2
Trichloroethene	<2
Tetrachloroethene	<2
Total Xylene	<2
1,1 Dichloroethene	<2
trans 1,2 Dichloroethene	<2
Toluene	<2

=====

Analyst: Dale Myers


Laboratory Manager

ALCHEM LABORATORY

104 W. 31st Street
Boise, Idaho 83714
(208)336-1172

TECHNICO - ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

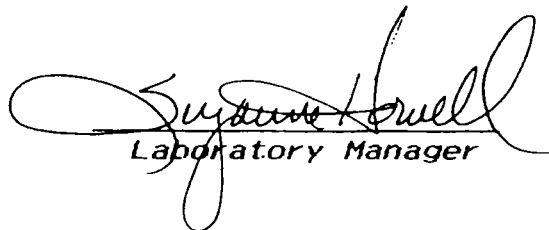
DATE COLLECTED: 10/03/89
TIME COLLECTED:
DATE RECEIVED: 10/04/89
DATE REPORTED: 10/26/89

ATTENTION: JOHN ZILlich
SOURCE: EE 5

LABORATORY SAMPLE NO. - 10715

ANALYSIS	RESULTS (ppb)
Vinyl Chloride	<2
1,1 Dichloroethane	<2
Chloroform	<2
1,1,1 Trichloroethane	<2
Trichloroethene	<2
Tetrachloroethene	<2
Total Xylene	<2
1,1 Dichloroethene	<2
trans 1,2 Dichloroethene	<2
Toluene	<2

Analyst: Dale Myers


Laboratory Manager

ALCHEM LABORATORY

104 W. 31st Street
Boise, Idaho 83714
(208)336-1172

TECHNICO - ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

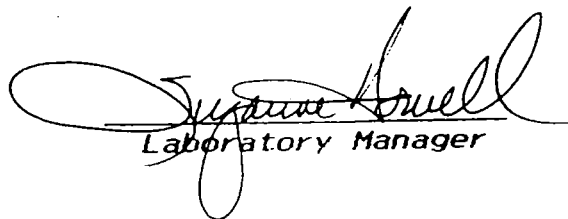
DATE COLLECTED: 10/03/89
TIME COLLECTED:
DATE RECEIVED: 10/04/89
DATE REPORTED: 10/26/89

ATTENTION: JOHN ZILLICH
SOURCE: EE 4

LABORATORY SAMPLE NO. - 10714

ANALYSIS	RESULTS (ppb)
Vinyl Chloride	<2
1,1 Dichloroethane	<2
Chloroform	<2
1,1,1 Trichloroethane	<2
Trichloroethene	<2
Tetrachloroethene	<2
Total Xylene	<2
1,1 Dichloroethene	<2
trans 1,2 Dichloroethene	<2
Toluene	<2

Analyst: Dale Myers


Laboratory Manager

ALCHEM LABORATORY

104 W. 31st Street
Boise, Idaho 83714
(208)336-1172

TECHNICO - ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

DATE COLLECTED: 10/03/89
TIME COLLECTED: 4:00 PM
DATE RECEIVED: 10/04/89
DATE REPORTED: 10/26/89

ATTENTION: JOHN ZILlich
SOURCE: WSW

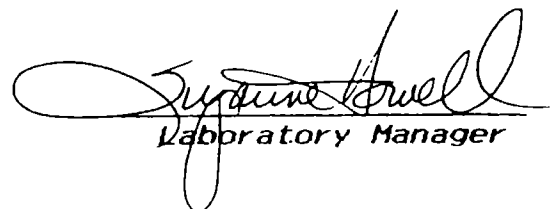
LABORATORY SAMPLE NO. - 10599

=====

ANALYSIS	RESULTS (ppb)
Vinyl Chloride	<2
1,1 Dichloroethane	<2
Chloroform	<2
1,1,1 Trichloroethane	<2
Trichloroethene	<2
Tetrachloroethene	<2
Total Xylene	<2
1,1 Dichloroethene	<2
trans 1,2 Dichloroethene	<2
Toluene	<2

=====

Analyst: Dale Myers


Laboratory Manager

ALCHEM LABORATORY

104 W. 31st Street
Boise, Idaho 83714
(208)336-1172

TECHNICO - ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

DATE COLLECTED: 09/28/89
TIME COLLECTED:
DATE RECEIVED: 09/29/89
DATE REPORTED: 10/26/89

ATTENTION: JOHN ZILlich
SOURCE: EE 3

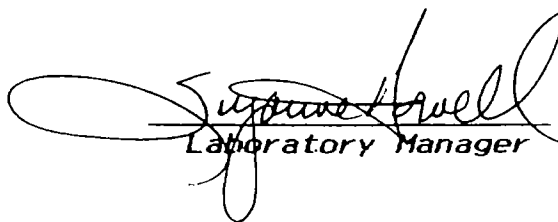
LABORATORY SAMPLE NO. - 10598

=====

ANALYSIS	RESULTS (ppb)
Vinyl Chloride	13.6
1,1 Dichloroethane	380.0
Chloroform	63.0
1,1,1 Trichloroethane	1093.0
Trichloroethene	1035.0
Tetrachloroethene	102.0
Total Xylene	712.0
1,1 Dichloroethene	216.0
trans 1,2 Dichloroethene	<2
Toluene	2100.0

=====

Analyst: Dale Myers


Laboratory Manager

ALCHEM LABORATORY

104 W. 31st Street
Boise, Idaho 83714
(208)336-1172

TECHNICO - ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

DATE COLLECTED: 09/28/89
TIME COLLECTED: 2:37 PM
DATE RECEIVED: 09/29/89
DATE REPORTED: 10/26/89

ATTENTION: JOHN ZILLICH
SOURCE: EE 2

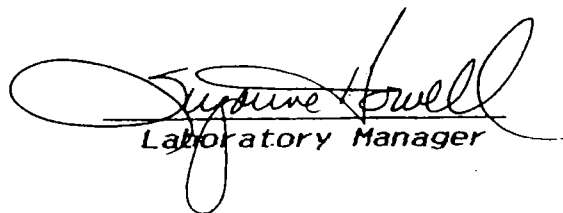
LABORATORY SAMPLE NO. - 10597

=====

ANALYSIS	RESULTS (ppb)
Vinyl Chloride	<2
1,1 Dichloroethane	9.7
Chloroform	<2
1,1,1 Trichloroethane	25.3
Trichloroethene	24.8
Tetrachloroethene	6.4
Total Xylene	<2
1,1 Dichloroethene	4.3
trans 1,2 Dichloroethene	<2
Toluene	<2

=====

Analyst: Dale Myers


Laboratory Manager

ALCHEM LABORATORY

104 W. 31st Street
Boise, Idaho 83714
(208)336-1172

TECHNICO - ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

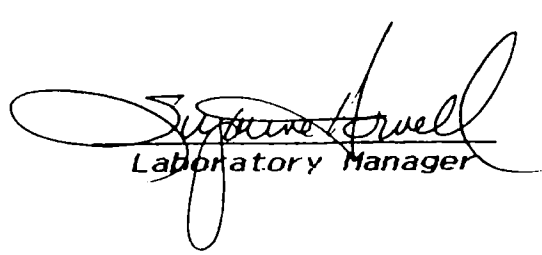
DATE COLLECTED: 09/28/89
TIME COLLECTED: 9:40 AM
DATE RECEIVED: 09/29/89
DATE REPORTED: 10/26/89

ATTENTION: JOHN ZILlich
SOURCE: JUB 4

LABORATORY SAMPLE NO. - 10596

ANALYSIS	RESULTS (ppb)
Vinyl Chloride	<2
1,1 Dichloroethane	<2
Chloroform	<2
1,1,1 Trichloroethane	<2
Trichloroethene	<2
Tetrachloroethene	<2
Total Xylene	<2
1,1 Dichloroethene	<2
trans 1,2 Dichloroethene	<2
Toluene	<2

Analyst: Dale Myers


Laboratory Manager

ALCHEM LABORATORY

104 W. 31st Street
Boise, Idaho 83714
(208)336-1172

TECHNICO - ENVIRO SERVICE
1776 FOWLER, SUITE 33
RICHLAND, WASHINGTON 99352

DATE COLLECTED: 09/28/89
TIME COLLECTED:
DATE RECEIVED: 09/29/89
DATE REPORTED: 10/26/89

ATTENTION: JOHN ZILlich
SOURCE: JUB CONTROL

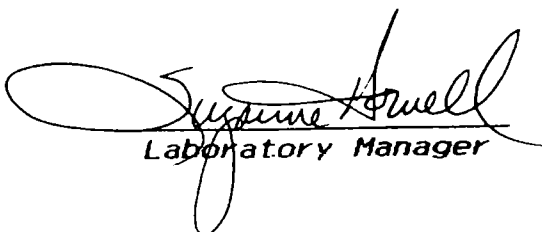
LABORATORY SAMPLE NO. - 10595

=====

ANALYSIS	RESULTS (ppb)
Vinyl Chloride	<2
1,1 Dichloroethane	<2
Chloroform	<2
1,1,1 Trichloroethane	<2
Trichloroethene	<2
Tetrachloroethene	<2
Total Xylene	<2
1,1 Dichloroethene	<2
trans 1,2 Dichloroethene	<2
Toluene	<2

=====

Analyst: Dale Myers


Laboratory Manager